DiniTools



Technical Operating Manual

DINITOOLS_04.11_10.07_EN

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1. INTRODUCTION

The Dinitools software allows the management of the DFW03/DFWK03, DFW06/DFWK06,TRI, TRS03, CPW03 and 3590M3/3590E series' indicators: there is a customer database in which it is possible to store the indicators which are used. By receiving and transmitting directly the instrument data directly from PC, it is possible to recall the desired configurations and/or transfer them on a similar instrument without repeating the programming from keyboard.

1.1 MAIN FUNCTIONS

- Formatting the print formats (for TRI, TRS03, CPW03 and 3590M3/3590E indicators).
- Programming of the printout heading for the DFW03/DFWK03 and DFW06/DFWK06 indicator.
- Back-up, restore and modification of the available data on the indicators (set-up, calibration, databases).
- "Weigh Console" application: display of the current weight on the PC with possibility of receiving the standard weight string from the indicator by pressing a key on the PC.

2. PC MINIMUM REQUIREMENTS AND PROGRAMME INSTALLATION

2.1 PC MINIMUM REQUIREMENTS

- Pentium 4 with 256 Mb Ram
- 200 MB of empty space on disk
- Windows XP operating system
- Monitor with 800x600 minimum resolution, 256 colours
- A RS232 serial port.
- Installation of the following components:
 - Run-time Visual Basic 5.0
 - Microsoft Data Access Component 2.7
 - Microsoft .net Framework 2.0. Careful: larger or smaller frameworks do not support the application.
 - Microsoft Jet 4.0 Service Pack 8 for Windows XP

2.2 INSTALLATION

1) By launching the installation file, the following screenshot will appear:

| Installer | Language | X |
|-----------|---------------------------|---|
| | Please select a language. | |
| | English | * |
| | OK Cancel | |

Select the language and press on "OK" to continue.

2) Accept the license terms (select "I agree") to continue:



3) Select the install location and press "Next >" to continue:

| 🗟 DiniTools Setup | |
|---|---|
| E DINI ARGEO | Choose Install Location Choose the folder in which to install DiniTools. |
| Setup will install DiniTools in and select another folder. | n the following folder. To install in a different folder, click Browse Click Next to continue. |
| Destination Folder | |
| C:\Programmi\DiniTool: | Browse |
| Space required: 71.5MB Space available: 26.7GB | |
| Nullsoft Install System v2.46 - | < Back Next > Cancel |

4) Selects which components to install:

| 🕙 DiniTools Setup | | |
|--|---|---|
| E DINI ARGEO | Choose Components Choose which features of Din | Tools you want to install. |
| Check the components you w install. Click Install to start th | | components you don't want to |
| Select components to install: | ✓ DiniTools ✓ WeighConsole | Description Position your mouse over a component to see its description. |
| Space required: 70.5MB | 7 | |
| Nullsoft Install System v2.46 — | < <u>B</u> ack | Install Cancel |

5) Follow the installation steps; at the end the following window will appear:

| 🕙 DiniTools Setup | | |
|---------------------------------|--|------------|
| DINI ARGEO | Installation Complete Setup was completed successfully. | |
| Completed | | |
| Nullsoft Install System v2.39 - | | ose Cancel |

6) Click on "Close" to end the procedure; it's now possible to open the Dinitools using the connection created on the desktop.

3. THE MAIN MENU

3.1 File Menu:

- New: To create a new object (a customer, a scale, a print format, etc.).
- Open: To modify the data of the selected object.
- **Delete:** To cancel the selected object.
- Save: To save the modifications made.
- Exit: To exit the programme.

3.2 View Menu:

- **Refresh:** To update the screen data.
- **Print preview:** To print a preview of the selected print format or of the selected heading, for the configured printer.
- Details: To view the details of the objects.
- Icons: To view the objects in a large icon format.
- Small Icons: To view the objects in a small icon format.

3.3 Tools Menu:

- **Calibration Tool:** Allows to receive, modify, transmit and file the complete set-up of an indicator, if supported (see section 9.4.2).
- Weigh Console: Programme for viewing on PC the weight displayed by the indicator and receive it by pressing a key (see section 10.1 "Weigh Console");
- Communication: To configure the parameters relative to the PC communication port (see section 5);
- **Options:** Allows setting the configuration options of the system (see section 6);

3.4 Help Menu:

- **Supported instrument:** To view information regarding the instruments and the relative versions supported by DiniTools. By selecting an instrument one can view from which version it can be managed with DiniTools.
- About: To view information regarding the Dini Tools version in use, the warranty, the user license and the user's declaration of responsibility. The "e-mail" and "Web" links respectively allow to transmit an e-mail using its own electronic e-mail programme to the Dini Argeo s.r.l. information section and to automatically connect to the Dini Argeo s.r.l. home page. Press "OK" to exit.

4. THE TOOLBAR

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- Exit: to exit the programme.
- New: to create a new object (a customer, a scale, a print format, etc.).
- Delete: to cancel a selected object.
- Open: to modify the selected object data.
- Options: allows setting the database file path.

View:

- Details: to view the objects' details.
- Icons: to view the objects in a large icon format.
- Small Icons: to view the objects in a small icon format.

Help:

• Supported instrument: To view information regarding the instruments and the relative supported versions by DiniTools. By selecting an instrument one can view from which version it can be managed with DiniTools.

· About: to view information regarding the Dini Tools version in use, the warranty, the user license and the user's declaration of responsibility. The "e-mail" and "Web" links respectively allow to transmit an e-mail using its own electronic e-mail programme to the Dini Argeo s.r.l. information section and to automatically connect to the Dini Argeo s.r.l. home page.

Save label: in the print formats management, it allows to save the modifications made through the Dinitools editor.

Run Editor: in the print formats management, it allows to edit the format through the Windows editor used on the PC (e.g. Notepad).



Print preview: To print a preview of the selected print format or of the selected heading, for the configured printer.

5. COMMUNICATION

5.1 CONFIGURATION

Allows setting the parameters relative to the communication between the PC and the weight indicator.

• With the mouse's left key click on the is in the lower right section of the status bar, or from the main menu select **Tools** >> **Communication**; the following window will appear:

| S COMMUNICATION | | |
|------------------|--|---|
| Port: | 1 | - |
| 485 address: | | |
| Bits per second: | 9600 | • |
| | Lock baud rate (useful with Bluetooth) | |
| Data bits: | 8 | • |
| Parity: | None | • |
| Stop bits: | 1 | - |
| | | |
| IP Address: | | |
| TCP Port: | | _ |
| | | |
| Test | Advanced <u>D</u> K <u>C</u> ancel | |

- **"Port"** specifies which port is connected to the weight indicator: select / insert the number of the serial port (COM) of the PC or select Net if the communication takes place through the TCP socket.
- "485 Address" specifies the 485 address of the weight indicator, if the "485" communication protocol is being used, leave the box empty if a "standard" communication protocol is being used.
- "Bit per second", "Data bit", "Parity" and "Stop Bit" must be compatibly set with the indicator's configuration (see the indicator's technical manual) if the communication takes place through the serial port.
- "Lock baud rate (useful with Bluetooth)" forces the setup transmission and reception with the selected speed (bit per second).
- "**IP address**" and "**TCP port**" must be configured if the communication takes place through the TCP socket compatibly with the indicator configuration.
- By pressing "**Test**", a test programme is started which, with a 485 communication, searches the scale/s eventually connected to the configured port (up to the 10 address); while with a 232 communication or through the TCP socket it verifies the correct setting of the configuration parameters: either the "Test successful" or "No scale found" message will appear.
- Confirm with "OK" or press "Cancel" in order to not save the changes made.

Note: on the indicator it is necessary to configure the data transmission mode as "upon request" and the communication protocol as "standard" or "485" (see the indicator's technical manual).

5.2 STATUS OF THE CONNECTION

An icon on the bottom, on the left of the window indicates the status of the data transmission between the PC and the indicator:

- Image: Image: green green of the second s
- (yellow) indicates that it is waiting for a data transfer.
- (red) icon indicates communication problems: check the serial communication 1parameters on the PC as well as on the indicator.
- X (grey) indicates that the communication is disabled: see section 5.3.

5.3 DISABLING / ENABLING

It's possible to disable the communication, in case one wants to use the programme also with the indicator not connected, and reenable it later on, when the indicator is connected once again.

With the left key click on the icon in the lower right of the screen, indicating the status of the data transmission between the PC and the indicator; a menu will appear which varies depending on the connection status:

Disable communication in case of enabled connection; select this option to disable the communication; the following message will appear:



informing the user to click on the icon in the lower right in order to reenable the connection.

Enable communication in case of disabled connection; select this option to reenable the communication.

6. SYSTEM CONFIGURATION

Select the **Tools >> Options**; the following window will appear:

| System's configuration | | | |
|--|--------------|----------|----------------|
| Database path C:\Programmi\DiniTools\Sc | aletools.mdb | | Browse |
| Language | English | | • |
| Load list in fast mode 🛛 💌 | | | |
| Print terminator | CRLF | - | |
| Log 🔽 | | | |
| | | <u> </u> | <u>C</u> ancel |

6.1 SETTING THE DATABASE FILE PATH.

- Press the "Browse" key of the "Database Path" field if one wants to change the path of the file.
- Select the new path.
- Confirm with "**OK**" or press "**Cancel**" to not save; confirm with "**OK**"; the programme automatically opens the selected database.

NOTES:

- By selecting "Load List in fast mode" the database elements are loaded only in the moment in which these are selected; with a very full database, the Dinitools will have a much quicker start that in the "normal" mode.

6.2 DINITOOLS LANGUAGE SELECTION

- Select one of the available languages in the "Language" field to view the menu descriptions and the checks in the desired language.
- Confirm with "**Ok**" or press "**Cancel**" to not save; by confirming with "**OK**" one will be asked to restart the programme:

| DiniToo | ls 🛛 🔀 |
|---------|---|
| 2 | The selected language will be active the next time the application starts. Restart the application right now? |
| | <u>N</u> o |

- Confirm with "Yes" or press "No" to not restart.

6.3 PRINT TERMINATOR SELECTION

- Select one of the available print terminators in the "Print terminator" field.

The selected terminator is used:

- Each time that one saves a modification in the configuration of a format with the DINITOOLS editor (see section 9.1.1.1): all the CR, LF or CR LF characters are RECONVERTED in the selected terminator character.
- In the print preview of a print format or of a heading (see sections 9.1.8 and 9.3.6): after each print macro which provides for the terminator, the selected terminator is inserted.
- Confirm with "OK" or press "Cancel" to exit without saving.

6.4 ENABLING OF THE LOG

- By selecting "Log", at the next start of the program the Datalog.log file is created inside the folder of the program. This file contains information such as date and time of program's start, the version of the program, the database path, the data of system's configuration and the communication data. At every next start of the program the following message is displayed:



- Confirm with Yes; by pressing No the log is disabled.

7. "CUSTOMERS" MENU - CUSTOMERS MANAGEMENT



The "CUSTOMERS" allows managing the data of the customers and the relative scales through a tree menu system.

7.1 CREATION OF A NEW CUSTOMER

To create a new customer one can proceed in the following ways:

- 1) With the left key of the mouse click on the "Customers" item in left window and:
 - From the main menu choose "File" and "New" (or the CTRL+N fast keys), or
 - From the toolbar press "New",
- 2) With the right key of the mouse click on the "Customer" item in the left window and choose the "New Customer" item.

The following window will appear:

| Customer's management | X |
|-----------------------|----------|
| Name | Address |
| Location | Country |
| | |
| Phone | Notes |
| | <u>^</u> |
| Web | |
| Email | |
| | ~ |
| | |
| | <u> </u> |

- Enter the customer name in the "Name" field (obligatory field) and possibly the other available fields.
- Confirm with "OK": the inserted customer will appear in the tree menu on the left.
- Press "Cancel" to exit without saving.

7.2 MODIFYING DATA OF A CUSTOMER

To modify a customer one can proceed in the following ways:

- 1) With the left key of the mouse click on the desired customer.
 - From the main menu choose "File" and "Open", or
 - From the toolbar press "Open";
- 2) With the right key of the mouse click on the desired customer in the left window, and choose "Edit Selected Customer",
- 3) With the left key of the mouse select the "Customers" item in the left window and:
 - Press the right key of the mouse on the desired customer in the right window and choose "Edit Selected Customer".

The following window will appear:

| Customer's management | X |
|-------------------------------|---------------------------|
| Name JOHN SMITH LTD | Address STH AVENUE |
| Location LONDON | Country UK |
| Phone +44 1234-123456 | Notes |
| Web www.johnsmithltd.uk | |
| Email info@johnsmithltd.uk | |
| · | <u>O</u> K <u>C</u> ancel |

- Modify the desired fields.
- Confirm with "OK", or just "Cancel" to not save.

7.3 CANCELLATION OF A CUSTOMER

To cancel a customer together with its scales one can proceed in the following ways:

1) With the left key of the mouse click on the desired customer and:

- From the main menu choose "Edit" and "Delete" (or the CTRL+D fast keys), or
- From the toolbar press "Delete";
- Confirm the request of the cancellation.
- 2) With the right key of the mouse click on the desired customer in left window, and:
 - Choose "Delete Selected Items",
 - Confirm the request of the cancellation.

7.3.1 CANCELLATION OF SEVERAL CUSTOMERS

To cancel various customers simultaneously one should:

- With the left key of the mouse select the "Customers" item in the left window
- With the left key of the mouse click on the customer to be eliminated in the right window.
- With the right key of the mouse click on one of the selected customers in the right window, and choose "Delete Selected Items",
- Confirm the cancellation request.

NOTE

To select various objects simultaneously, keep the CTRL key pressed of the PC keyboard and click on the desired codes.

7.4 COPY OF A CUSTOMER

- To copy the data and the scales of an existing customer into a new customer one can proceed in the following ways:
- 1) With the right key of the mouse click on the desired customer in left window, and choose "Copy selecet customer".
- 2) With the left key of the mouse click on the "Customer" item in the left window and:
 - With the right key of the mouse click on the desired customer in right window and choose "Copy selecet customer".

The following window will appear:

| Customer's management | |
|-------------------------------|-----------------------|
| Name JOHN SMITH LTD | Address STH AVENUE |
| Location | Country UK |
| Phone | Notes |
| +44 1234-123456 Web | <u>^</u> |
| www.johnsmithltd.uk | |
| Email info@johnsmithltd.uk | |
| | <u> </u> |

- Modify the name of the customer in the "Name" field (compulsory fiedl) and eventually the other available fields.
- Confirm with "OK", or press "Cancel" to not save.

The following window will appear:

| Wait customer copy |
|--------------------|
| |
| |

- Wait for the customer copy, and once finished, the customer copy will appear in the tree menu on the left.

7.5 EXPORTING A CUSTOMER IN A DATABASE FILE

To export the data and the scales of an existing customer in an external database file one can proceed in the following ways:

- 1) With the right key of the mouse click on the desired customer in left window and choose "Export selected customer",
- 2) With the left key of the mouse click on the "Customer" item in the left window and:
 - With the right key of the mouse click on the desired customer in right window and choose "Export selected customer".

7.5.1 EXPORTING PROCEDURE

The following window will appear:

| Customer(s) ex | port | | | | ? 🛛 |
|--|---|-------------------|---|----------|---------|
| Salva jn: | DiniTools | | • | + 🗈 💣 📰+ | |
| Documenti recenti Desktop Documenti Documenti Risorse del computer | Customization Diz Firmwares Language Nuova cartella Printer Setups SQL Temp Solai Scalet | ools.mdb | | | |
| Risorse di rete | Nome file: | 1 | | • | Salva |
| | Sal <u>v</u> a come: | MDB files (*.mdb) | | _ | Annulla |

- Select the destination path of the file to be created.
- Enter the name of the database file to be created.
- Press on "Save".

The following window will appear:



- Wait for the export of the customer.

Once ended, a new database file (.mdb) will be in the selected path; this file will hold the selected customer with the relative data and scales.

This file can be opened like a main database (see section 6.1) or used to import the customer into another database (see section 7.6).

7.5.2 EXPORTING VARIOUS CUSTOMERS

To export various existing customers in an external database file one should:

- With the left key of the mouse click on the "Customer" item in the left window.
- With the left key of the mouse choose the customers to be exported into the right window.
- With the right key of the mouse click on one of the selected customers in the right window and choose "Export selected customer",

At this point it's possible to execute the exportation of the selected customers, see section 7.5.1.

NOTE

To select various objects at the same time, keep the CTRL key pressed of the PC keyboard and click on the desired codes.

7.6 IMPORTING CUSTOMERS FROM A DATABASE FILE

- To import the data and the scales of a customer stored in an external database file one should:
- With the right key of the mouse click on the "Customers" item in the left window;
- Choose "Import customers".

The following window will appear:

| Customer(s) im | iport | | | | ? 🛛 |
|---|--|---------------------------|---|----------|---------|
| Cerca jn; | DiniTools | | • | + 🗈 💣 📰+ | |
| Documenti recenti Desktop Documenti Risorse del computer | Customizal Diz Firmwares Instrument Language Nuova cart Printer Setups SQL Temp Copia di Sc Scaletools. | s ella aletools.mdb | | | |
| Risorse di rete | <u>N</u> ome file: | L | | | Apri |
| | <u>T</u> ipo file: | MDB file (*.mdb) | | <u> </u> | Annulla |

- Select the destination path of the file that is selected.
- Select the database file from which the customers are imported.
- Click on "Open".

The following window will appear:

| 1 | Select the customers to import |
|---|--|
| | CUSTOMERS DEMOKIT STANDARD 3590M3 STANDARD 3590M301 STANDARD 3590M302 STANDARD 3590M303 STANDARD 3590M304 STANDARD 3590M305 |
| | <u> </u> |

- With the left key of the mouse select the customers to be imported;
- Press on "Ok" to confirm or "Cancel" to cancel; by pressing on "Ok" the following window will appear:

| Wait customer(s) import |
|-------------------------|
| |
| |
| |

- Wait for the selected customers to be imported, and once finished, the imported customers will appear in the tree menu on the left.

7.7 UPDATING A CUSTOMER FROM A DATABASE FILE

To update the data and the scales of a customer with the ones of a customer stored in an external database file one should:

- With the right key of the mouse click on the customer to be updated in the left window;
- Choose "Import selected customer".

The following window will appear:

| DiniTool | s 🗵 |
|----------|---|
| 2 | The operation will overwrite customer's data. Continue? |
| | |

Confirm with "YES", the following window will appear:

| Customer(s) im | port | | | | ? 🔀 |
|---|--|------------------------------|----------|----------|---------|
| Cerca jn: | DiniTools | | . | + 🗈 💣 📰+ | |
| Documenti recenti Desktop Documenti Risorse del computer | Customiza Diz Firmwares Instrumen Language Nuova car Printer Setups SQL Temp Copia di So Scaletools | ts tella caletools.mdb | | | |
| Risorse di rete | <u>N</u> ome file: | | | | Apri |
| | <u>⊺</u> ipo file: | MDB file (*.mdb) | | • | Annulla |

- Select the destination path of the file that is selected.
- Select the database file for which you want to search the customer.
- Click on "Open".

The following window will appear:

| 2 | Select the customers to import |
|---|--|
| | CUSTOMERS DEMOKIT STANDARD 3590M3 STANDARD 3590M301 STANDARD 3590M302 STANDARD 3590M303 STANDARD 3590M304 STANDARD 3590M305 |
| | <u> </u> |

- With the left key of the mouse select the customers to be imported;
- Press on "Ok" to confirm or "Cancel" to cancel; by pressing on "Ok" the following window will appear:

| Wait cust | omer(s) i | mport | | |
|-----------|-----------|-------|--|-----|
| _ | | | | |
| | | | | - 1 |
| | | | | |

- Wait for the updating of the selected customer, and, once finished, the data of the customer will be overwritten with the ones of the customer in the database file.

8. SCALE'S MANAGEMENT

8.1 CREATION A NEW SCALE

To create a new scale one can proceed in the following ways:

- 1) With the left key of the mouse click on the customer to whom you want to link the scale with, in the left window:
 - From the main menu choose "File" and "New" (or the CTRL+N fast keys), or
 - From the toolbar press "New",
- 2) With the right key of the mouse click on the customer to whom you want to link the scale with, and choose the "New Scale" item.

8.1.1 SCALE CONFIGURATION

The following window will appear:

| Scale's management | |
|-----------------------------|----------|
| Description - serial number | |
| | |
| Version | |
| | |
| Notes | |
| | <u>~</u> |
| | |
| | |
| | ~ |
| | |
| Alphabet LATIN 1 | |
| Off-line | |
| Model Supported version | Language |
| | v |
| | |
| , | |
| Read version Off-line | <u> </u> |

In the "**Description - serial number**" field one should enter the description or the serial number which one wants to link to the scale, and which will be viewed in the tree list of the left window.

- In the "Notes" field one can insert any useful annotations.
- In the "Alphabet" field one can select the type of characters that can be inserted in the instrument and printed.

READING OF THE FIRMWARE VERSION OF THE SCALE

- Press the "Read Version" button: The connected indicator version as well as the structure of the databases will be received automatically.
- In case of communication problems, which can be caused by an incorrect serial port connection or a wrong
 parameter setting, or if the connection to the scale is missing, there will be the following error,



 If the databases are not provided for on the indicator, the "Archive Structure not Available" message will be given.

MANUAL SETTING FO THE FIRMWARE VERSION

- Press the "off-line" button
- Select the model, version and language (if foreseen) of the desired indicator;
- Press the "Read version" button

Automatically both the version of the selected indicator as well as the database structure will be received.

SAVING THE CONFIGURATION

Confirm with "OK"; the scale will appear in the tree menu on the left:



8.2 MODIFYING A SCALE'S DATA

To modify a scale one can proceed in the following ways:

- 1) With the left key of the mouse click on the desired scale and:
 - From the main menu choose "File" and "Open", or
 - From the toolbar press "Open";
- 2) With the right key of the mouse click on the desired scale in the left window, and choose "Edit selected scale",
- 3) With the left key of the mouse click on its customer in the left window and:
 - With the right key of the mouse click on the desired scale, in the right window, and choose "Edit selected scale".

At this point it is possible to modify the scale configuration; see section 8.1.1.

8.3 DELETING A SCALE

To delete a scale one can proceed in the following ways:

1) With the left key of the mouse click on the desired scale and:

- From the main menu choose "Edit" and "Delete" (or the CTRL+D fast keys), or
- From the toolbar press "Delete";
- Confirm the deletion request.
- 2) With the right key of the mouse click on the desired scale in the left window, and:
 - Choose "Delete Selected Items",
 - Confirm the deletion request.

8.3.1 DELETION OF SEVERAL SCALES

To cancel various scales at the same time one should:

- With the left key of the mouse click on its customer in the left window.
- With the left key of the mouse click on the scales to be deleted in the left window.
- With the right key of the mouse click on one of the selected scales in the right window and choose "Delete Selected Items".
- Confirm the deletion request.

NOTE

To select various objects simultaneously, keep the CTRL key pressed of the PC keyboard and click on the desired codes.

8.4 COPY OF A SCALE

To copy the databases, the headings, the print formats and the setups of an existing scale into a new scale one can proceed in various ways:

- 1) With the right key of the mouse click on the desired scale in the left window, and choose "Copy selected scale",
- 2) With the left key of the mouse click on its customer in the left window and:
 - With the right key of the mouse click on the desired scale in the right window and choose "Copy selected scale".

The following window will appear:

| Copy scale | × |
|------------------------------------|----------------|
| Insert new scale's serial number | |
| TEST SCALE 1 | |
| Select new scale's customer | |
| TEST CUSTOMER 1 | - |
| TEST CUSTOMER 1 TEST CUSTOMER 2 | _ |
| <u></u> K | <u>C</u> ancel |

Modify the description / serial number of the scale (compulsory field) and select the customer into which the scale should be copied.

- Confirm with "OK", or press "Cancel" to not save.
- Wait for the scale copy and, once finished, the copied scale will appear in the tree menu on the left.

8.5 SCALE TEST

By pressing the right key of the mouse on the desired scale in the left window, and by selecting **"Test selected scale"** one starts a test to verify whether the indicator version corresponds to that of the selected scale:

- if this is so, the following message will appear:



- while if the version is different one will have the following message:



- while with an impossible connection, one will have the following message:



9. OPERATIONS ON THE SCALES

9.1 PRINT FORMATS MANAGEMENT (TRI, TRB, TRD, TRS03, CPW03, 3590M3 SERIES', 3590E SERIES' INDICATORS)

| TiniTools v.4.11.00 | | |
|----------------------|---------------|---------------------------|
| File View Tools Help | | |
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| E 😒 CUSTOMERS | Name Notes | |
| E 🚉 TEST CUSTOMER 1 | | |
| TEST SCALE 1 | | |
| DATABASES | | |
| PRINT FORMATO | format | |
| SETUPS Receive a | print formats | |
| EST CUSTOMER 2 | | |
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9.1.1 CREATION OF A NEW PRINT FORMAT

To create a new print format one can proceed in the following ways:

- 1) With the left key of the mouse click on the "Print formats" item, in the left window and:
 - From the main menu choose "File" and "New" (or the CTRL+N fast keys), or
 - From the toolbar press "New",
- 2) With the right key of the mouse click on the "Print formats" item, and choose the "New Print format" item.

9.1.1.1 PRINT FORMAT CONFIGURATION

The following window will appear:

| Print format's management | | | | | |
|---------------------------|--------|-------|---------|-------------|--------------|
| Name | Macros | | | | |
| | INDEX | Value | Preview | Description | |
| Print format number(s) | | | | | Add |
| 1 | | | | | Text |
| Printer | | | | | Edit |
| GENERIC LATIN1 | | | | | Delete |
| Notes | | | | | A |
| | | | | | + |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | 1 | | | | |
| | | | | | |
| Send Get Export | Import | Print | | Save | <u>E</u> xit |

- Enter the format name in the "Name" field (if it's not entered, the "Save" key is not enabled).
- In the "**Print Format Number(s)**" field enter the number(s) with which the print format will be transmitted to the indicator, in the following formats:

- Single format, ex: 1.
- Single formats, ex: 1,3,8.
- Interval of formats with the first and the last separated by a hyphen, ex: 1-5.
- Concatenation of single formats and interval of formats separated by a hyphen, ex: 1-3,8,12-15.
- To know the exact correspondence between the numbers and print formats, refer to the indicator's technical manual, in the "Print programmings" section.
- Confirm with "Save", or go out with "Exit".

FORMAT CONFIGURATION FROM DINITOOLS

- The "Add" key adds a print block or an ASCII code in the position after the selected one:

| Code | Name | Preview | |
|------|---------------------|---------------------|---|
| 300 | PRINT END | | |
| 301 | NET WEIGHT | NET = 2.000kg | |
| 302 | GROSS WEIGHT | GROSS = 3.000kg | |
| 303 | TARE WEIGHT | PT = 1.000kg | |
| 304 | TOTALISATION NET | N. 3 NET 2.000 kg | |
| 305 | TOTALISATION GROSS | N. 3 GROSS 3.000 kg | |
| 306 | TOTALISATION TARE | N. 3 TARE 1.000 kg | |
| 307 | NET PARTIAL TARE | N. 3 T1.N. 5.000 kg | |
| 308 | NET GENERAL TOTAL | N. 3 T2.N. 5.000 kg | |
| 309 | NET GRAND TOTAL | N. 3 T3.N. 5.000 kg | |
| 310 | GROSS PARTIAL TOTAL | N. 3 T1.G. 7.000 kg | |
| 011 | OBOGG GENEDAL TOTAL | N 979G 7000 kg | |
| < | | | > |

- By entering a text in the "Macro filter" field and by clicking the Filter key one can view all the print macros which contain this text inside the Name field:
- In the "Value to insert" field enter the number of the print block or of the ASCII code with which one wants to print, or click twice with the left key of the mouse on the desired macro inside the list in order to compile the field automatically, and confirm with "Save"; the code will appear in the "Macros" window:

| Print format's management | | | | | | | |
|---------------------------|----------|--------|-------|---------|-------------|--------------|--------------|
| Name | | Macros | | | | | |
| 1 | | INDEX | Value | Preview | Description | | |
| Print format number(s) | 0 | 0 | 301 | | NET WEIGHT | | Add |
| 1 | <u> </u> | | | | | | Text |
| Printer | | | | | | | Edit |
| GENERIC LATIN1 | - | | | | | | Delete |
| Notes | _ | | | | | | |
| | - | | | | | | <u> </u> |
| | | | | | | | • |
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| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | ~ | | | | | | |
| | | | | | | | |
| Send Get Ex; | 1 | 1 | Print | 1 | | Couro | <u>E</u> xit |
| Send Get Exp | port | Import | Print | | | <u>S</u> ave | |

NOTES:

- The complete list of the print blocks is in the indicator's technical manual.
- If one enters a print block of the type "with parameter" (see the connected indicator's technical manual) one will be asked to enter an additional number.
- By selecting the "ASCII" form, it is possible to access the complete list of the ASCII codes: by clicking

twice on the desired code, it will appear in the "Value to insert" field. Confirm with "Save" in order to enter it in the print format.

- In the "**Printer**" field one should select the type of printer which will be connected to the indicator, useful for the preview function of the format (see section 9.1.8). Select "**Not in list**" if the connected printer is not in the list; otherwise the preview function is not available.
- The "Edit" key allows modifying a print block or an ASCII code already in the list.

| New Block | |
|---|--------------|
| Insert the code of the new block. You need to insert a ASCII code for a fixed text or a code greater than 299 for a Macro. Read the Scale's Manual to get more informations about Macros | OK Cancel |
| 301 | |

- Enter the new ASCII code or the new print block and confirm with OK.
- The "Delete" key allows cancelling an ASCII code from the list or the selected print block; it is also possible to select various codes at a time by keeping pressed the CTRL key of the PC and clicking with the left key on the desired codes.
- The **†** and **↓** keys serve to move the code selected either in preceding position or in the following one.

FORMAT CONFIGURATION WITH THE WINDOWS EDITOR

One can modify the print format by opening the Windows editor used on the PC (i.e.. Notepad), by pressing this icon

All the modifications saved inside the Windows editor will be shown also in the format, after the closing of the editor.

Notes on the use of the Windows Editor

- One should **create and select** a print format in order to enable the editor icon.
- It's not possible to operate Dinitools until the editor is closed.

FORMAT CONFIGURATION WITH DINITOOLS EDITOR

Once the format has been created and saved, the screen on the right will shown the preview of the format made:

| DiniTools v.4.11.00 | | | × |
|--|--------------------------|-------------------------|----|
| <u>File Vi</u> ew <u>T</u> ools <u>H</u> elp | | | |
| 🔟 🖹 🗙 🚱 😼 | • 🙋 • 🖬 💋 🍆 | _ | |
| CUSTOMERS CUSTOMER 1 TEST SCALE 1 CONTROL PRINT FORMATS CONTROL CONTR | @[302]@[301]@[303]@[300] | | |
| DFW06 Ver:02.00.00 | | 🌮 driver 01.00.05 🏾 📝 📘 | 11 |

As one may notice the print blocks are expressed in the **@[number]** format; the window may also be an **editor** of the programme, in other words it's possible to modify the format directly from the window typing the desired characters.

To save the modifications press in the instruments bar.

Notes on the editor:

- The 🖾 icon is enabled only if modifications have been made by the editor.
- Each time enter is pressed on the PC keyboard a CRLF is inserted (ASCII 13 and 10 characters).
- Each time that a modification is saved, all the CR, LF or CRLF characters are RECONVERTED in the terminator character selected in the TOOL >> OPTION menu (see section 6.3); furthermore the print end (300 print block) is inserted, if not present.

9.1.2 MODIFYING A PRINT FORMAT

To modify a print format one can proceed in various ways:

- 1) With the left key of the mouse click on the desired format in the left window and:
 - From the main menu choose "File" and "Open", or
 - From the toolbar press "Open";
- 2) With the right key of the mouse click on the desired format in the left window and choose "Edit Selected Print Format",
- 3) With the left key of the mouse click on its scale in the left window and:
 - With the right key of the mouse click on the desired format in the left window and choose "Edit Selected Print Format".

At this point it's possible to modify the print format, see section 9.1.1.1.

9.1.3 DELETION OF A PRINT FORMAT

To cancel a print format one can proceed in various ways:

- 1) With the left key of the mouse click on the desired format and:
 - From the main menu choose "Edit" and "Delete" (or the CTRL+D fast keys), or
 - From the toolbar press "Delete";
- Confirm the request of the deletion.
- 2) With the right key of the mouse click on the desired format in left window, and:
 - Choose "Delete Selected Items",
 - Confirm the request of the deletion.

9.1.3.1 DELETION OF SEVERAL FORMATS

To cancel various print formats simultaneously one should:

- With the left key of the mouse click on the "Print Formats" items in the left window.
- With the left key of the mouse choose the print formats to be deleted in the right window.
- With the right key of the mouse click on one of the selected formats in the right window and choose "Delete Selected Items".
- Confirm the request of the cancellation.

NOTE

To select various objects simultaneously, keep the CTRL key of the PC keyboard pressed and click on the desired codes.

9.1.4 TRANSMISSION OF THE PRINT FORMAT TO THE INDICATOR

- Once the print format is compiled, press the "Send" key.

| The operation will overwrite the data contained in the print format(s). Do you wish to go on? | Send Pr | int Format 🛛 🛛 |
|---|---------|---|
| | 8 | The operation will overwrite the data contained in the print format(s). Do you wish to go on? |
| <u>∑</u> <u>N</u> o | | |

- Confirm with "YES" or press "No" to not transmit the formats; by confirming with "Yes" the following window will appear.

| Send Print Format | |
|---------------------------------------|---------------|
| Select the Print Format(s) to be sent | OK Annulla |
| 1-30 | |

- The number(s) which appear(s) in the window indicates the number(s) of the print format(s) to which it will be destined; this number(s) is automatically inserted using the "**Print format number(s)**" field previously filled in.
 - Enter the desired number(s) (or leave the one(s) already present), in the following formats:
 - Single format, ex: 1.
 - Single formats, ex: 1,3,8.
 - Interval of formats with the first and the last separated by a hyphen, ex: 1-5.
 - Concatenation of single formats and interval of formats separated by a hyphen, ex: 1-3,8,12-15.
- Confirm with OK.

NOTE

-

If during the transmission the "Can't send Print Vectors Format" message appears, it means that it isn't possible to transmit the print format; check that:

- A number of print blocks greater than what is admitted by the indicator has been transmitted.
- The version of the connected indicator is the same as the one of the created scale (see section 8.1).

9.1.4.1 TRANSMISSION OF VARIOUS PRINT FORMATS TO THE INDICATOR

To transmit various print formats simultaneously one should:

- With the left key of the mouse choose the "Print formats" item in the left window
- With the left key of the mouse choose the print formats to be transmitted in the right window.
- With the right key of the mouse click on one of the selected formats in the right window and choose "Transmit selected print formats":

| RINT FORMATS | | | |
|--------------------|----------|-------|----------------|
| Print format | Name | Notes | |
| 3 | 003 | · | |
| 4 | 004 | | |
| 5 | 005 | | |
| 6 | 006 | | |
| | | | |
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| Transmitting print | format 3 | | |
| | | | |
| | | | <u>C</u> ancel |

• Wait for the transmission, and once ended, the following window will appear:



• Confirm with "Ok".

NOTE

To select various objects simultaneously, keep the CTRL key of the PC keyboard pressed and click on the desired codes.

9.1.4.2 TRANSMISSION OF ALL THE PRINT FORMATS CONFIGURED TO THE INDICATOR

- To transmit all the configured print formats one should:
- With the right key of the mouse click on the "Print formats" in the left window and choose "Transmit selected print formats":

| P | RINT FORMATS | | | | X |
|---|--------------------|----------|---|-------|----------------|
| | Print format | Name | | Notes | ~ |
| | 1 | 001 | | | |
| | 2 | 002 | | | |
| | 3 | 003 | | | |
| | 4 | 004 | | | |
| | 5 | 005 | | | |
| | 6 | 006 | | | |
| | 7 | 007 | | | |
| | 8 | 008 | | | |
| | 9 | 009 | | | |
| | 10 | 010 | | | |
| | 11 | 011 | | | |
| | 12 | 012 | | | |
| | 13 | 013 | | | |
| | 14 | 014 | | | |
| | 15 | 015 | | | |
| | 16 | 016 | | | |
| | 17 | 017 | | | |
| | 18 | 018 | | | |
| | 19 | 019 | | | |
| | 20 | 020 | | | |
| | 21 | 021 | | | |
| | 22 | 022 | | | ~ |
| | | | | | |
| , | Transmitting print | tormat 1 |] | | |
| | | | | | <u>C</u> ancel |

• Wait for the transmission, and once ended, the following window will appear:



• Confirm with "Ok".

9.1.5 RECEPTION OF THE PRINT FORMAT FROM THE INDICATOR

- Once the print format is open, press on the "Get" key:

| Read Format | |
|---|---------|
| Select the Print Format to be read (1 to) | ОК |
| | Annulla |
| 1 | |

- The number which appears in the window indicates the number of the print format which will be received by the indicator; this number is automatically inserted in the "**Print format number**" field previously filled in.
- Enter the desired number (or leave the one already present) and confirm with OK.

NOTES:

- The received print formats will substitute the previous ones.
- The correspondence of the print format numbers is shown on the connected indicator's technical manual.

9.1.5.1 RECEPTION OF VARIOUS PRINT FORMATS FROM THE INDICATOR

To receive various print formats simultaneously one should:

- With the left key of the mouse choose the "Print formats" item in the left window
- Hold pressed the Ctrl key and with the left key of the mouse select the print formats to be received in the right window.
- With the right key of the mouse click on one of the selected formats in the right window and choose "Receive selected print formats":

| P | RINT FORMATS | | | | | \mathbf{X} |
|---|---------------------|--------|-------|------------|----------------|--------------|
| | Print format | Name | Notes | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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| | | | | | | |
| | | | | | | |
| | | | | | | |
| | Receiving print for | rmat 2 | | | | |
| - | Edit | Delete | | <u>0</u> K | <u>C</u> ancel | |

- Once the reception is ended, it's possible to execute some operations before saving the received formats:
 - Modify the name or the format number: select the format to be modified and press the "Modify" button; the following window will appear:

| Print format | |
|--------------|----------|
| Print format | 1 |
| Name | 001 |
| Notes | |
| | |
| | <u> </u> |

Modify the desired fields, and press "Ok" to confirm or "Cancel" to cancel.

- Cancel one or various formats: select the formats to be cancelled and press the "Delete" button.
- Press "Ok" to save the received formats or "Cancel" to cancel the operation. By pressing on "Ok" the received formats will appear in the tree menu on the left.

9.1.5.2 RECEPTION OF ALL THE PRINT FORMATS OF THE INDICATOR

To receive all the print formats in the indicator one should:

- With the right key of the mouse click on the "Print formats" item in the left window;
- Choose "receive all print formats";

The following window will appear:

| Printer selection | |
|---|----------------|
| Select which of the following associate to the received prin | |
| GENERIC LATIN1 | • |
| · | |
| <u></u> K | <u>C</u> ancel |

• Select the type of printer which will be connected to the indicator, useful for the preview function of the format (see section 9.1.8).

| PRINT FORMATS | | | | X |
|---------------|--------|-------|------------|----------------|
| Print format | Name | Notes | | ~ |
| 1 | 001 | | | |
| 2 | 002 | | | |
| 3 | 003 | | | |
| 4 | 004 | | | |
| 5 | 005 | | | |
| 6 | 006 | | | |
| 7 | 007 | | | |
| 8 | 008 | | | |
| 9 | 009 | | | |
| 10 | 010 | | | |
| 11 | 011 | | | |
| 12 | 012 | | | |
| 13 | 013 | | | |
| 14 | 014 | | | |
| 15 | 015 | | | |
| 16 | 016 | | | |
| 17 | 017 | | | |
| 18 | 018 | | | |
| 19 | 019 | | | |
| 20 | 020 | | | |
| 21 | 021 | | | |
| 22 | 022 | | | ~ |
| 1.00 | 000 | | | <u> </u> |
| | | | | |
| Edit | Delete | | <u>0</u> K | <u>C</u> ancel |

Once the reception is ended and before saving the received formats, it is possible to execute the same
operations indicated in the previous paragraph.

9.1.6 EXPORTING OF THE PRINT FORMAT IN A TEXT FILE

- Once the print format is opened, press on the "Export" key:

| alva con nom | e | | | | ? 🛽 |
|---|--|-----------------------|---|---------|--------------------------|
| Salva in: Salva in: Documenti recenti Desktop Documenti Documenti | 105 | | 1 | + E 🕂 🎟 | |
| computer | <u>N</u> ome file: Sal <u>v</u> a come: | File di testo (*.txt) | | | <u>S</u> alva Annulla |

- Select the path of the file destination.
- Enter the name of the file.
- Press on "Save".
- One will have a new text file in the selected path which has the ASCII codes and the inserted print blocks.

EXAMPLE

| 1.txt - Blocco note | | × |
|--|---|--------|
| <u>File M</u> odifica F <u>o</u> rmato <u>V</u> isualizza <u>?</u> | | |
| \$\$[302]@[301]@[303]@[300] | | ~ |
| | | \sim |
| | > | |

The print blocks are translated in the **@[XXX]**, format in which XXX is the block number, while the ASCII codes are interpreted according to their value (for example the ASCII code decimal 65, will be translated into "A").

9.1.7 IMPORTING OF THE PRINT FORMAT FROM AN EXISTING TEXT FILE.

- Press on the "Import" key:

| Apri | | | | | ? 🔀 |
|--|--|-----------------------|--|---|---|
| Cerca jn; | DiniTools | | <u> </u> | E 💣 💷- | |
| Documenti recenti Desktop Documenti | Customization Diz Firmwares Instruments Canguage Printer Setups SQL Temp S1.xt Calib.exe Calib.exe Calib.ini | | CLIENTI.Idb CLIENTI.mdb Configuration.xml Copia di Scaletools.mdb Data.txt Dini.Communication.dll Dini.Dictionary.dll Dini.Instruments.dll Dini.Instruments.dll dnzip102interop.dll emptydb.mdb EnumSerialPorts.dll | Ibvboot.lc Link.ico msvbvm5 p.mdb PCX2ITA. Port.xml PrintArchi PrintForm PrintForm printstn.e prova.md ScaleTool | 0.dll exe ve.xml at.xml at.xsl xe b |
| Risorse del computer | < | | | | > |
| | <u>N</u> ome file: | ſ | | <u> </u> | Apri |
| Risorse di rete | <u>⊺</u> ipo file: | Tutti i file (*.* |) | • | Annulla |
| | | 🗖 Ap <u>r</u> i in so | la lettura | | |

- Select the desired text file.
- Press "Open": the print format will substitute the present one: the codes entered in the @[XXX] format (in which XXX is the block number) are translated as print blocks; the other characters are decoded in the relative ASCII decimal code.

EXAMPLE

| 🔊 1.txt - Blocco note | |
|---|----|
| <u> Eile M</u> odifica F <u>o</u> rmato <u>V</u> isualizza <u>?</u> | |
| ¦\$[302]@[301]@[303]@[300] | ~ |
| | ~ |
| <u><</u> | ≥; |

It will be translated into the following print format:

| Print format's management | | | | | | |
|---------------------------|--------|-------|---------|--------------|--------------|--------------|
| Name | Macros | | | | | |
| 1 | INDEX | Value | Preview | Description | | |
| Print format number(s) | 0 | 302 | | GROSS WEIGHT | | Add |
| | 1 | 303 | | TARE WEIGHT | | Text |
| Printer | 2 | 301 | | NET WEIGHT | | Edit |
| | 3 | 300 | | PRINT END | | Delete |
| GENERIC LATIN1 | | | | | | |
| Notes | | | | | | |
| <u>^</u> | | | | | | • • |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| S | | | | | | |
| | | | | | | |
| | | | | | | |
| Send Get Export | Import | Print | | | <u>S</u> ave | <u>E</u> xit |

9.1.8 FORMAT PRINT PREVIEW VISUALIZATION

Once a format is configured, it's possible to view a formatted print preview for the type of selected printer. To set the type of printer see section 9.1.1.1.

Select the desired format with the left key of the mouse, in the left window; the right window is subdivided in two parts:

| Enc. | | | |
|--|--|------------------|-------------------------|
| 🖼 DiniTools v.4.11.00 | | | |
| <u>File View Tools Help</u> | | | |
| 🔟 🗎 🗙 🔂 🐝 🛅 | • 🙆 • 🔲 🗖 🍪 | | |
| CUSTOMERS TEST CUSTOMER 1 TEST SCALE 1 DATABASES PINT FORMATS SETUPS TEST SCALE 2 TEST CUSTOMER 2 | @[2]@[384]@[0]@[385]@[386] @[302]@[303]@[301]@[300] | | |
| | | Printout preview | |
| 3590M301 Ver:08.00.04 | | | 🌮 driver 01.00.05 🏾 🛒 🗖 |

To view the print preview:

- From the main menu choose "View" and "Print preview", or
- From the toolbar press "Print preview",

In the lower part of the window on the right there will be a preview of the print format for the configured printer:

| 🖼 DiniTools v.4.11.00 | | |
|---|--|-------------------------|
| File View Iools Help | • 🗟 • 🗖 🍠 🍪 | |
| CUSTOMERS CUSTOMERS CUSTOMER1 CONTROL | @[2]@[384]@[0]@[386] @[302]@[303]@[301]@[300] | |
| | Printout preview | |
| | HEADING HEADING | 0 1 2 |
| | GROSS = 3.000k PT = 1.000k NET = 2.000k | g |
| 3590M301 Ver:08.00.04 | | 🌾 driver 01.00.05 📝 🗖 🏸 |

9.2 DATABASE MANAGEMENT (3590M3 AND 3590E INDICATORS)

Depending on which indicator is connected, it is possible to manage the relative databases; if an indicator is connected which version is without database management, an error will be given upon the acquisition of the database structure (see section 8.1): "**Archive structure not available**".

9.2.1 CREATION OF A NEW DATABASE

To create a new database one can proceed in various ways:

- 1) With the left key of the mouse click on the "Databases" item, in the left window and:
 - From the main menu choose "File" and "New" (or the CTRL+N fast keys), or
 - From the toolbar press "New",
- 2) With the right key of the mouse click on the "Databases" item, and choose the "New Database" item.

9.2.1.1 DATABASE CONFIGURATION

The following window will appear:

| Database's mana | gement | X |
|-----------------|------------|----------------|
| Name | | |
| Notes | | |
| Notes | | ~ |
| | | |
| | | |
| | | ~ |
| - | | |
| | <u>0</u> K | <u>C</u> ancel |

- Enter the name of the database in the "Name" field.
- If necessary enter the notes in the "Notes" field.
- Press "OK" and "Cancel": the new created database will appear in the tree menu on the left.
- By clicking on the name of the new created database, all the available databases will appear.

Example with 3590M301 weight indicator:



Depending on the type of database, there will be various data to be filled in; for example an article database will have various description lines, a linked tare, etc. This can be seen by clicking on the database itself and in the window on the right all the linked fields.

9.2.2 COMPILATION AND MANAGEMENT OF A DATABASE

With the right key of the mouse click on the name of the desired table of the database and select "Edit Selected Table".



The window with the modification, cancellation, transmission and reception commands is the same for all types of tables:

| Table man | agement - ARTICLE D | ATABASE | | | |
|-----------|---------------------|--------------|--------------|-------------|------------------|
| INDEX | DESCRIPTION1 | DESCRIPTION2 | DESCRIPTION3 | LINKED TARE | E dit record |
| 0000 | EMPTY | | | | |
| 0001 | EMPTY | | | | Clear selected |
| 0002 | EMPTY | | | | |
| 0003 | EMPTY | | | | |
| 0004 | EMPTY | | | | Get selected |
| 0005 | EMPTY | | | | |
| 0006 | EMPTY | | | | Send selected |
| 0007 | EMPTY EMPTY | | | | Send selected |
| 0008 | EMPTY | | | | |
| 0010 | EMPTY | | | | ▲ |
| 0010 | EMPTY | | | | Т |
| 0012 | EMPTY | | | | • |
| 0013 | EMPTY | | | | + |
| 0014 | EMPTY | | | | |
| 0015 | EMPTY | | | | Copy record |
| 0016 | EMPTY | | | | Copy record |
| 0017 | EMPTY | | | | |
| 0018 | EMPTY | | | | Paste record |
| 0019 | EMPTY | | | | |
| 0020 | EMPTY | | | | |
| 0021 | EMPTY | | | | |
| 0022 | EMPTY | | | | |
| 0023 | EMPTY | | | | |
| 0024 | EMPTY | | | | Import table |
| 0025 | EMPTY | | | | |
| 0026 | EMPTY | | | | Export table |
| 0027 | EMPTY | | | | |
| 0028 | EMPTY | | | | |
| 0029 | EMPTY | | | | |
| 0030 | EMPTY | | | | |
| 0031 | EMPTY | | | ~ | • |
| < | EMDTV | | | > | |
| | | | | | |
| | | | Send Get | Print | ave <u>E</u> xit |
| | | _ | | | <u> </u> |

• EDIT RECORD: allows filling in the selected object.

Note: in case one enters numeric values (e.g. tare, APW, etc...) one must enter the number inclusive of the decimal point.

- CLEAR SELECTED RECORDS: allows cancelling the selected object (all the descriptions will be empty).
- GET SELECTED RECORDS: Allows receiving from the indicator just the selected object.
- SEND SELECTED RECORDS: Allows receiving from the indicator just the selected object.
- COPY RECORD: Allows to copy the content of a single record.
- **PASTE RECORD:** Allows to paste the content of a single record.
- IMPORT TABLE: Allows to import the content of a table from a .csv file or a .xml file.
- **EXPORT TABLE:** Allows to export the content of the table in a .csv file or in a .xml file.
- SEND: Allows transmitting to the indicator all the database objects.
- GET: Allows receiving from the indicator all the database objects.
- **PRINT:** Allows to generate an XML file with the list of the stored objects.

NOTE

To select various objects simultaneously, keep pressed the CTRL key of the PC and click on the desired codes.

9.2.3 RECEPTION OF A TABLE

To receive from the indicator the content of a table of a database, click with the left key of the mouse on the name of the database and then with the right key of the mouse on the name of the desired table, then select "**Receive selected table**". The following message is shown:



Press Yes to confirm or No to not receive the data.

9.2.3.1 RECEPTION OF MORE TABLES

To receive more selected tables, click with the left key of the mouse on the name of the database and, by holding pressed the Ctrl key, select with the left key of the mouse the desired tables in the window on the right. Then click with the right key of the mouse on one of the selected tables and press "Get selected tables". Then the following message is shown:



Press Yes to confirm or No to not receive the data.

9.2.3.2 RECEPTION OF ALL THE TABLES OF A DATABASE

To receive the content of all the tables of a database, click with the left key of the mouse on the name of the desired database and select "**Receive all the tables of the selected database**". The following message is shown:



Press Yes to confirm or No to not receive the data.

9.2.4 TRANSMISSION OF A TABLE

To transmit to the indicator the content of a table of a database, click with the left key of the mouse on the name of the database and then with the right key on the name of the desired table, then select **"Send selected table"**. Then the following message is shown:

| Transmit record(s) | |
|--------------------|---|
| 8 | The operation will change all records on the scale. Do you wish to go on? |
| | <u> </u> |

Press Yes to confirm or No to not transmit the data.

9.2.4.1 TRANSMISSION OF MORE TABLES

To transmit more selected tables, click with the left key of the mouse on the name of the database and, by holding pressed the Ctrl key, select with the left key of the mouse the desired tables in the window on the right. Then click with the right key of the mouse on one of the selected tables and press "**Send selected tables**". Then the following message is shown.



Press Yes to confirm or No to not transmit the data.

9.2.4.2 TRANSMISSION OF ALL THE TABLES OF A DATABASE

To transmit the content of all the tables of a database, click with the right key of the mouse on the name of the desired database and select "Send all the tables of the selected database". Then the following message is shown:



Press Yes to confirm or No to not transmit the data.
9.2.5 EXPORTING AND IMPORTING OF A TABLE

To export the data of a table of a database, click with the left key of the mouse on the name of the database and then with the right key on the name of the desired table, then select "**Export table**":

| Salva jn: | 🞯 Desktop | | • | 🖿 💣 🎟 - | |
|--|----------------|--|-------|----------|---------------|
| Documenti recenti Desktop Documenti | Collegamento a | Ishida prodotti prodotti old Scansioni su FaxInOut (faxi Test webftp su 192.168.16.9 pnali | nout) | | |
| Risorse di rete | Nome file: | | | <u> </u> | <u>S</u> alva |
| | | | | | |

- Select the path of the file destination.
- Select the .csv format or the .xml format.
- Insert the name of the file.
- Press on "Save".

To import the data of a table of a database, click with the left key of the mouse on the name of the database and then with the right key on the name of the desired table, then select "**Import table**". Select the desired file, then the following message is displayed:

| DiniToo | ls 🛛 🕅 |
|---------|---|
| 8 | The operation will overwrite all records. Do you wish to go on? |
| | <u>N</u> o |

Press Yes to confirm or No to not overwrite the data..

9.2.6 MODIFYING A DATABASE'S DATA

To modify the name and the notes of a database one can proceed in various ways:

1) With the left key of the mouse click on the desired database and:

- From the main menu choose "File" and "Open", or
- From the toolbar press "Open";
- 2) With the right key of the mouse click on the desired database in the left window, and choose "Edit selected database",
- 3) With the left window of the mouse click on its scale in the left window and:
 - With the right key of the mouse click on the desired database, in the right window, and choose "Edit selected database",

At this point it's possible to modify the desired data, see section 9.2.1.1.

9.2.7 CANCELLATION OF A DATABASE

To cancel a database one can proceed in various ways:

- 1) With the left key of the mouse click on the desired database and:
 - From the main menu choose "File" and "Delete" (or the CTRL+D fast keys), or
 - From the toolbar press "Delete",
 - Confirm the request of the cancellation.
- 2) With the right key of the mouse click on the desired database in the left window, and:
 - Choose "Delete selected items"
 - Confirm the request of the cancellation.

9.2.7.1 CANCELLATION OF SEVERAL DATABASES

To cancel various databases simultaneously one should:

- With the left key of the mouse click on the "BATABASES" item in the left window.
- With the left key of the mouse choose the databases to be eliminated in the right window.
- With the right key of the mouse click on one of the selected databases in the right window and choose "Delete selected items".
- Confirm the request of the cancellation.

NOTE

To select various objects simultaneously, keep the CTRCL key of the PC keyboard pressed and click on the desired codes.

9.2.8 UPDATING OF DATABASES' STRUCTURE

Once that one has inserted a scale with databases, if one tries to read another version of the firmware and the new structure of the databases is different, one is asked to update the databases.



Press Yes to confirm; if No is pressed, the version of the firmware is not read.

9.2.8.1 UPDATING OF DATABASES' NAMES

If in the new version of the firmware there are one or more databases with different names from the actual ones, the following screen is shown:

| Check archives | |
|--|---|
| Compare the present archive names with the new a desired. The data of an archive will be copied to the li will be empty. | archive names and link them as nked one. If an archive has no link |
| Present archives | New archives |
| PRODUCTS INGREDIENTS INPUT TEXTS TARE DATABASE | PRODUCTS INGREDIENTS TEXTS TARE DTB. |
| | CUSTOMERS |
| To Link: choose an element on the left and one Link Un on the right and press Link | link To Unlink: choose an element on the left and press Unlink |
| Links every element on the left with the element on the same line on the right | nk all Unlinks all the elements |
| Non linked archive | |
| | Next > Cancel |

- To link only one database, select the name of the desired database in the column of the present archives:

| Check archives | | N 100 N 1 |
|--|-------------|---|
| Compare the present archive n desired. The data of an archive wi | | |
| Present archives | | New archives |
| PRODUCTS INGREDIENTS INPUT TEXTS TARE DATABASE CUSTOMERS | | PRODUCTS INGREDIENTS TEXTS TARE DTB. CUSTOMERS |
| | | |
| To Link: choose an element on the left and one on the right and press Link | nk Unli | ink To Unlink: choose an element on the left and press Unlink |
| Links every element on the left with the element on the same line on the right | < all Unlin | k all Unlinks all the elements |
| Non linked archive | | |
| | | Next > Cancel |

Select the name of the new database that one wants to link to the present database:

| Check archives | | X |
|--|--|---|
| Compare the present archive r desired. The data of an archive w | names with the new a ill be copied to the lin will be empty. | archive names and link them as nked one. If an archive has no link |
| Present archives | | New archives |
| PRODUCTS | | PRODUCTS |
| INGREDIENTS INPUT TEXTS | ▶ | INGREDIENTS TEXTS |
| TARE DATABASE | | TARE DTB. |
| CUSTOMERS | | CUSTOMERS |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | ink Un | |
| on the right and press Link | | press Unlink |
| Links every element on the left with the element on the Lin same line on the right | kall Unlin | nk all Unlinks all the elements |
| same line on the light | | |
| Non linked archive | | |
| | | Next > Cancel |

Then press the Link key to link the selected databases:

| Che | eck archives | | | | | | × |
|-----|--|-------|------------|---------------|---|----------------|---|
| | Compare the present archive r desired. The data of an archive w | | to the lir | | | | |
| | Present archives | | | | New archi | ves | |
| | PRODUCTS INGREDIENTS | | * | | DIENTS | | |
| | INPUT TEXTS | | - | TEXTS TARE | | | |
| | CUSTOMERS | | | | DHB. DMERS | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | To Link: choose an element on the left and one on the right and press Link | ink | Unli | ink | To Unlink: ch element on the press Un | e left and | |
| | Links every element on the left with the element on the same line on the right | k all | Unlin | k all | Unlinks all the | elements | |
| | Non linked archive | | | | | | |
| | | | | | Next > | <u>C</u> ancel | |

-To unlink only one database, select the name of the desired database in the column of the present archives:

| Check archives | | | |
|--|-------------|---|----------------|
| Compare the present archive r desired. The data of an archive w | | | |
| Present archives | | New archiv | 'es |
| PRODUCTS | | PRODUCTS | |
| INGREDIENTS INPUT TEXTS | | INGREDIENTS TEXTS | |
| TARE DATABASE | | TARE DTB. | |
| CUSTOMERS | | CUSTOMERS | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| To Link: choose an element on the left and one on the right and press Link | ink Un | To Unlink: cho element on the press Unl | left and |
| Links every element on the left with the element on the Lin same line on the right | k all Unlin | k all Unlinks all the e | elements |
| Non linked archive | | | |
| | | Next > | <u>C</u> ancel |

Then press the Unlink key:

| Check archives | | |
|--|--------------|--|
| | | rchive names and link them as iked one. If an archive has no link |
| Present archives | | New archives |
| PRODUCTS INGREDIENTS INPUT TEXTS TARE DATABASE CUSTOMERS | | PRODUCTS INGREDIENTS TEXTS TARE DTB. CUSTOMERS |
| To Link: choose an element on the left and one L on the right and press Link | .ink Uni | To Unlink: choose an element on the left and press Unlink |
| Links every element on the | nk all Unlin | · |
| | | Next > Cancel |

-To cancel all the links between the databases, press the "Unlink all" key:

| Check archives | | | | |
|--|---------|--|---------------------|--|
| Compare the present archive names with the new archive names and link them as desired. The data of an archive will be copied to the linked one. If an archive has no link will be empty. | | | | |
| Present archives | | New archiv | ves | |
| PRODUCTS INGREDIENTS INPUT TEXTS TARE DATABASE CUSTOMERS | | PRODUCTS INGREDIENTS TEXTS TARE DTB. CUSTOMERS | | |
| on the right and press Link | ink Uni | press Un | e left and Ilink | |
| | | Next > | Cancel | |

-To link each of the present databases with the new database on the same line, press the "Link all" key:

| Check archive | S | | | × |
|--|----------------|--------|--|----------------|
| Compare the present archive names with the new archive names and link them as desired. The data of an archive will be copied to the linked one. If an archive has no link will be empty. | | | | |
| Pre | sent archives | | New archive | es |
| PRODUCTS INGREDIEN INPUT TEXT TARE DATA CUSTOMER | 'S BASE | | PRODUCTS INGREDIENTS TEXTS TARE DTB. CUSTOMERS | |
| element on t on the right Links every left with the same line | and press Link | nk Uni | press Unli | left and nk |
| | | | Next > | <u>C</u> ancel |

9.2.8.2 UPDATING OF THE NAMES OF DATABASES' FIELDS

If in one or more databases of the new version of the firmware there are fields with different names from the actual ones, the following screen is shown (example: database "PRODUCTS").

| Check archive 'PRODUCTS' field | 5 | | | |
|--|---------|---|-----------------------|--|
| Compare the present field names with the new field names and link them as desired. If a left field has no link the data related to that field could be lost | | | | |
| Present fields |] | New fie | lds | |
| DESCRIPTION 1 DESCRIPTION 2 DESCRIPTION 3 DESCRIPTION 4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | | DESCR.NO.1 DESCR.NO.2 DESCR.NO.3 DESCR.NO.4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | 1 | |
| on the right and press Link | ink Uni | press L | he left and Inlink | |
| | | Next > | <u>C</u> ancel | |

-To link only one field, select the desired field in the column of the present archives:



Select the new field that one wants to link to the present field:



Then press the "Link" key to link the selected fields:

| Check archive 'PRODUCTS' fields | ; | Σ | K | |
|---|-------------------------|---|---|--|
| Compare the present field names with the new field names and link them as desired. If a left field has no link the data related to that field could be lost | | | | |
| Present fields | | New fields | | |
| DESCRIPTION 1 DESCRIPTION 2 DESCRIPTION 3 DESCRIPTION 4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | | DESCR.NO.1 DESCR.NO.2 DESCR.NO.3 DESCR.NO.4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS NGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | | |
| on the right and press Link | ink Unli k all Unlin | press Unlink | | |
| | | Next > Cancel | | |

-To unlink only one field, select the desired field in the column of the present fields:

| Check archive 'PRODUCTS' field | 5 | | |
|---|---|---|-----------------|
| Compare the present field names left field has no link | with the new field na the data related to th | mes and link them as de at field could be lost | sired. If a |
| Present fields |] | New field: | \$ |
| DESCRIPTION 1 DESCRIPTION 2 DESCRIPTION 3 DESCRIPTION 4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | | DESCR.NO.1 DESCR.NO.2 DESCR.NO.3 DESCR.NO.4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS INGREDIENTS NGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | |
| on the right and press Link | ink Unlin | press Uni | left and ink |
| | | Next > | <u>C</u> ancel |

Then press the Unlink key:



-To cancel all the links between the fields, press the "Unlink all" key:

| Check archive 'PRODUCTS' fields | | | | | | |
|---|--|--|--|--|--|--|
| Compare the present field names with the new field names and link them as desired. If a left field has no link the data related to that field could be lost | | | | | | |
| Present fields | New fields | | | | | |
| DESCRIPTION 1 DESCRIPTION 2 DESCRIPTION 3 DESCRIPTION 3 DESCRIPTION 4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | DESCR.NO.1 DESCR.NO.2 DESCR.NO.3 DESCR.NO.4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | | | | | |
| on the right and press Link | ink Unlink To Unlink: choose an element on the left and press Unlink k all Unlink all Unlinks all the elements | | | | | |
| Non linked field | | | | | | |
| | Next > Cancel | | | | | |

-To link each of the present fields with the new field on the same line, press the "Link all" key:

| Check archive 'PRODUCTS' fields | | | | | |
|---|--------|---|--|--|--|
| Compare the present field names with the new field names and link them as desired. If a left field has no link the data related to that field could be lost | | | | | |
| Present fields | | New fields | | | |
| DESCRIPTION 1 DESCRIPTION 2 DESCRIPTION 3 DESCRIPTION 4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | | DESCR.NO.1 DESCR.NO.2 DESCR.NO.3 DESCR.NO.4 EAN CODE CHECK DIGIT TARE PRINT FORMAT WEIGHT-PRICE PRICE SEASONING DAYS EXPIRY DAYS INGREDIENTS INGREDIENTS INGREDIENTS NUM NET TOTAL TARE TOTAL AMOUNT TOTAL WEIGHS TOTAL CUSTOMER | | | |
| on the right and press Link | nk Uni | press Unlink | | | |
| | | Next > Cancel | | | |

- If there are other databases with fields that have names different from the present fields, by pressing the Next> key the screens relating to these databases are shown.
- At the end of all the modifications, by pressing the Next> key the updating of the databases is executed.

| Scale's management | | |
|-----------------------------|-------------------|--------------------------|
| Description - serial number | | |
| 3590M305 | | |
| Version | | |
| 3590M305 11.04 EN | | |
| Notes | | |
| | | |
| | | |
| | | |
| | | ~ |
| 1 | | |
| Alphabet LATIN 1 | - | |
| -Off-line | | |
| Model | Supported version | Language |
| 3590M305 PRICE COMPUTI | 11.04 👻 | English |
| | | |
| - | | |
| Read version On-line | | <u>D</u> K <u>Cancel</u> |
| | 1 | |

9.3 MANAGING PRINTOUT HEADERS (DFW03/DFWK03 AND DFW06/DFWK06 SERIES' INDICATORS)

If a DFW03/DFWK03 (from the version 3.00.04) or a DFW06/DFWK06 series' indicator is connected, there will be an item in the tree called **"HEADERS**":



With this menu it is possible to transmit to the indicator a print header of up to 4 lines of 24 characters each; in any case with the 17-key extended keyboard indicator (DFWK03 and DFWK06) it is also possible to configure the header on the indicator itself (see the relative technical manual), while in the 5-key version (DFW03 DFW06) this operation isn't possible.

9.3.1 CREATION OF A NEW HEADER

To create a new header one can proceed in various ways:

- 1) With the left key of the mouse click on the "HEADERS" item, in the left window and:
 - From the main menu choose "File" and "New" (or the CTRL+N fast keys), or
 - From the toolbar press "New",
- 2) With the right key of the mouse click on the "HEADERS" item, and choose the "New Header" item.

9.3.1.1 HEADER CONFIGURATION

The following window will appear:

| Header's management | | |
|--|--------------------|--|
| Name | Lines | Enabling |
| 1 | 0 💌 | No (Header) |
| Printer | Header 1 - | - |
| GENERIC LATIN1 | Font | Text Ciear |
| Notes | Char 1 💌 | |
| · | Header 2 - Font | Text |
| | Char 1 | Clear |
| | Header 3 | , |
| | Font | Text Clear |
| | Char 1 💌 | Liear |
| | Header 4 - | |
| | Font | Text Clear |
| | Char 1 💌 | |
| The instrument is not in the setup environ | ment: headers | s will not be saved and will be lost at next turn-off. |
| | | |
| Send Get | | <u>S</u> ave E <u>x</u> it |

- In the "Name" field enter the name of the header.
- In the "Number" field select the number of lines which you want to use (up to 4).
- In the "Enabling" field select the mode in which the header will be printed, if one has selected the "Totalizer" functioning mode in the indicator; while if one uses another functioning mode, one just needs to select a different value from "No Header":
 - > "Print header only in the first totalization" (in other words, only after the zeroing of the total).
 - > "Print header in each totalization" (with each weigh).
 - "Print header in each totalization and in the total" (with each weigh and also in the total).
- For each required line, enter in the "Font" field the type of character height
 - **ChAr 1** = prints line with normal height (for tpr) or character 1 (for LP542PLUS).
 - **ChAr 2** = prints line with normal height (for tpr) or character 2 (for LP542PLUS).
- in the "Text" field the text contents (up to 24 characters); the "Clear" key allows the quick cancellation of the entire relative line.

- In the "**Printer**" field one should select the type of printer which will be connected to the indicator, useful for the preview function of the header (see section 9.3.6).
- Use the "Save" key to save and go out with the "Exit" key.
- The new header will appear in the tree menu on the left.

9.3.2 MODIFYING OF AN HEADER

To modify a header one can proceed in various ways:

- 1) With the left key of the mouse click on the desired header in the left window and:
 - From the main menu choose "File" and "Open", or
 - From the toolbar press "Open";
- 2) With the right key of the mouse click on the desired header in the left window, and choose "Edit selected item",
- 3) With the left key of the mouse click on its scale in the window on the left and:
 - With the right key of the mouse click on the desired header in the right window, and choose "Edit selected item".

At this point it's possible to modify the header, see section 9.3.1.1.

9.3.3 DELETION OF A HEADER

To delete a header one can proceed in various ways:

- 1) With the left key of the mouse click on the desired header in the left window and:
 - From the main menu choose "File" and "Delete" (or the CTRL+D fast keys), or
 - From the toolbar press "Delete",
 - Confirm the request of the deletion.

2) With the right key of the mouse click on the desired header in the left window, and:

- Choose "Delete selected items"
- Confirm the request of the deletion.

9.3.3.1 DELETION OF SEVERAL HEADERS

To delete various headers simultaneously one should:

- With the left key of the mouse click on the "HEADER" item in the left window.
- With the left key of the mouse the headers to be deleted in the window on the right.
- With the right key of the mouse click on one of the selected headers in the right window and choose "Delete selected items".
- Confirm the request of the cancellation.

NOTE

To select various objects simultaneously, keep the CTRL key of the PC keyboard pressed and click on the desired codes.

9.3.4 TRANSMISSION OF THE HEADING TO THE INDICATOR

- Enter in the modification of the header, see section 9.3.2.
- Press on the "Send" key: the header will be instantaneously transmitted to the indicator.

NOTE

If the connected indicator was in the normal weighing status, the heading will be lost when the instrument is turned off; this message will be highlighted in the header compilation window:

The instrument is not in the setup environment: headers will not be saved and will be lost at next turn-off.

In order that the heading is permanently stored, it is necessary that before its transmission, the instrument is in the SET-UP environment (see the indicator's technical manual).

In this way, when the transmission of the header is done, one must exit the instrument's set-up environment, saving the made changes.

9.3.5 RECEPTION OF THE HEADER FROM THE INDICATOR

- Enter in the modification of the header; see section 9.3.2.
- Press on the "Get" key: the header on the indicator will be received on the PC.

9.3.6 HEADER PRINT PREVIEW VISUALIZATION

Once a header is configured, it's possible to view a preview for the type of selected pritner; if one has selected "Not in list" the preview function is not available.

For the configuration of the printer type see section 9.3.1.1.

With the left key of the mouse select the desired header, in the window on the left; the window on the right will be ready to show the preview:



To show the print preview:

- From the main menu choose "View" and "Print preview", or
- From the toolbar press "Print preview",

In the windown on the right a preview for the configured printer will be proposed:

| 🖼 DiniTools v.4.11.00 | |
|---|--|
| <u>File Vi</u> ew <u>T</u> ools <u>H</u> elp | |
| 🔟 🗎 🗙 🚰 🥵 🖬 - 🗋 - | |
| CUSTOMERS CUSTOMER 1 CUSTOMER 1 CUSTOMER 1 CUSTOMER 1 CUSTOMER 1 CUSTOMER 1 CUSTOMER 2 CUSTOM | Printout preview |
| HEADERS HEADER1 SETUPS TEST CUSTOMER 2 | JOHN SMITH LTD 5th avenue London info@johnsmithltd.uk |
| | |
| | |
| 3590M301 Ver:08.00.04 | 🌮 driver 01.00.05 🛛 🛒 🧧 |

9.4 SETUP MANAGEMENT AND CALIBRATION

9.4.1 CREATION OF A NEW SETUP

To create a new setup one can proceed in various ways:

1) With the left key of the mouse click on "Setup" item, in the left window and:

- From the main menu choose "File" and "New" (or the CTRL+N fast keys), or
- From the toolbar press "New",

2) With the right key of the mouse click on the "Setup" item, and choose "New setup" item.

| S DiniTools v.4.11.00 | | | | |
|-------------------------------|----------|-------|-------------------|-------|
| File View Tools Help | | | | |
| 🔟 🗋 🗙 💕 😻 🛍 • 💆 • | | | | |
| E-S CUSTOMERS | Name | Notes | | |
| 🖨 🏭 TEST CUSTOMER 1 | | | | |
| 🚊 🕸 TEST SCALE 1 | | | | |
| 🗁 DATABASES | | | | |
| - 🥬 PRINT FORMATS | | | | |
| BETUDO BETUDO New setup | | | | |
| EST CUSTOMER 2 | | | | |
| _ | | | | |
| | | | | |
| | | | | |
| | | | | |
| | <u> </u> | | | |
| 3590M301 Ver:08.00.04 | | | 🌮 driver 01.00.05 | I 🛛 🎢 |

9.4.1.1 SETUP CONFIGURATION

PREMISE: For a correct reception/transmission of the setup of the latest released indicator versions, periodically check for a new version of the Dinitools update (see section 11) on the manufacturer's web site.

A window will appear containing the default parameters of the Setup, subdivided in folders; here below is an example of a default setup of the DFW06 indicator:

| Name Out of range value Shared value modified New parameter F.MODE GENERAL SETUP SCALES SERIAL PRINTER CONFIGURATION OUTPUTS/INPUTS SANALOG OUTPUT TARE AND ARCHIVE Notes FUNCTIONING MODE REFERENCE TIME STABILITY (Waik.I) 0.0 O O FUNCT (FunCl) NTGS O CHECK MODE GROSS O GENERAL SETTINGS CHECK MODE (YPE) GROSS O O BACK LIGHT (LAMP) LAM 1 O BEEP NEAR TARGET NO O O | - |
|--|---|
| FUNCTIONING MODE REFERENCE TIME STABILITY (Wak.t) 0.0 FUNCT (FunCl) NTGS CHECK MODE General settings CHECK MODE (YPE) GROSS | |
| FUNCTIONING MODE REFERENCE TIME STABILITY (Wak.t) 0.0 FUNCT (FunCl) NTGS CHECK MODE General settings CHECK MODE (YPE) GROSS | 1 |
| FUNCT (FunCt) NTGS CHECK MODE CHECK MODE CHECK MODE CHECK MODE (YPE) GROSS CHECK MODE (YPE) | |
| FUNCT (FunCt) INTGS CHECK MODE GENERAL SETTINGS CHECK MODE (MPE) GROSS Image: Check Mode (MPE) | |
| GENERAL SETTINGS CHECK MODE (YPE) GROSS | |
| | |
| | |
| BRIGHT (Lint) LINT 1 2 2 PERCENTAGE MODE | |
| SCREEN SAVER (SCr.SAV) 0 REFERENCE TIME STABILITY (Waikit) 0.0 0 | |
| IN OUT MODE MODE REPEATER | |
| IN OUT MODE (YPE) GROSS TARE < 🥥 STRING TERMINATOR (TERM) 0 | |
| MASTER MODE WEIGHT START POSITION (WEI.POS) 0 | |
| NUMBER OF SLAVES (muMSL) 0 WEIGHT LENGTH IN THE STRING (WEILEN) 0 0 | |
| PROTOCOL TYPE (PROTOC) EXTENDED | |
| KEYBOARD TYPE (T.KEYB) DFW FAMILY S O DECIMALS (DECI) 0 | |
| WEIGHT LIST(WGH.LST) no STABILITY READINGS (STAB) 0 0 | |
| | |
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| | |
| UNIT OF MEASURE PMU (uM APW) g 🔹 🥑 | |
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| | |
| Send Get Export Import Calibration Save Exit | |

- In the "Name" field one have to enter the name of the Setup; in the "Notes" field one may enter the notes useful to the user.
- By pressing "Get" one may receive the complete Set-up of the connected indicator; the indicator must be in the COMPLETE Set-up environment (in other words, if a protection password exists, it must be entered correctly).
- After a few instants the parameters in the Set-up of the indicator will appear
- Each step shows what is contained in the indicator's set-up (shown in between the parentheses) and by pressing on the question point next to it, an info window will appear explaining the parameter:

| Info set | up element 🛛 🔀 |
|----------|--|
| (į) | F.kEyS: FUNCTION KEYS |
| | Enabling/disabling of the F1, F2,F3, F4, F5, and F6 keys. - EnAbLE: enabled keys - diSAbL: disabled keys |
| | (!) EnAbLE |
| | OK |



-

By entering a value higher than the ones allowed or wrong in a parameter, the relative field is highlighted in yellow. Enter one of the desired valid values.

| lame Out of r | ange value | Shared valu | e modified New parameter | | |
|------------------------------|---------------------|---------------|---|--------------------------|---|
| | ango raido | | | | |
| MODE GENERAL SETUP SCALES S | ERIAL PRINTER CON | IFIGURATION 0 | JTPUTS/INPUTS SETPOINTS ANALOG OUTPUT 1 | TARE AND ARCHIVE Notes | |
| UNCTIONING MODE | | | REFERENCE TIME STABILITY (Wait.t) | 0.0 | ę |
| FUNCT (FunCt) | NTGS | - (| CHECK MODE | , | |
| GENERAL SETTINGS | , | | CHECK MODE (MPE) | GROSS | e |
| BACK LIGHT (LAMP) | LAM 1 | - (| BEEP NEAR TARGET | NO | |
| BRIGHT (L.int) | LINT 1 | - 6 | PERCENTAGE MODE | | |
| SCREEN SAVER (SCr.SAV) | 0 | | REFERENCE TIME STABILITY (Wait.t) | 0.0 | |
| IN OUT MODE | | | MODE REPEATER | | |
| IN OUT MODE (tYPE) | GROSS TARE | - (| STRING TERMINATOR (TERM) | 0 | 6 |
| MASTER MODE | , | | WEIGHT START POSITION (WEI.POS) | 0 | |
| NUMBER OF SLAVES (nuMSL) | 5 | | WEIGHT LENGTH IN THE STRING (WEI.LEN) | 0 | 4 |
| PROTOCOL TYPE (PROTOC) | EXTENDED | - 6 | STRING LENGTH (STRL.EN) | 0 | 6 |
| KEYBOARD TYPE (T.KEYB) | DFW FAMILY | - (| DECIMALS (DECI) | 0 | 4 |
| WEIGHT LIST(WGH.LST) | no | • | STABILITY READINGS (STAB) | 0 | |
| TOTALISER MODE | | | STABILITY INTERVAL (STA.INT) | 0 | 6 |
| TYPE OF TOTAL (tot.Mod) | NORMAL | - (| ENABLE ADDRESS (ADD.EN) | NO | |
| NUMBER OF WEIGHTS (MAX.tot) | 0 | | THE OUT A ST | 0.0 | e |
| COUNTING MODE | | | | | |
| UNIT OF MEASURE PMU (uM.APW) | g | - (| | | |

Shared value modified ;

- 1

By modifying the value of a shared parameter, the relative field is highlighted in blue. The shared parameters are the ones configured for various functioning modes, printer transmission modes, etc..

| etup's management - DFW06 03.06.0 | 00 XX 00 | | | |
|------------------------------------|---------------------|--------------|---|---|
| Name Outofra | ange value | Shared valu | lue modified New parameter | |
| | | | | _ |
| F.MODE GENERAL SETUP SCALES SE | RIAL PRINTER CONFIG | IURATION 0 | OUTPUTS/INPUTS SETPOINTS ANALOG OUTPUT TARE AND ARCHIVE Notes | |
| FUNCTIONING MODE | | | REFERENCE TIME STABILITY (Wailt) 0.0 | |
| FUNCT (FunCt) | NTGS | - | CHECK MODE | |
| GENERAL SETTINGS | , | | CHECK MODE (YPE) GROSS 🗸 🤉 | , |
| BACK LIGHT (LAMP) | LAM 1 | - (| BEEP NEAR TARGET | , |
| BRIGHT (L.int) | LINT 1 | - | PERCENTAGE MODE | |
| SCREEN SAVER (SCr.SAV) | 0 | | REFERENCE TIME STABILITY (Wailt) 0.0 2 | , |
| IN OUT MODE | | | MODE REPEATER | |
| IN OUT MODE (MPE) | GROSS TARE | - (| STRING TERMINATOR (TERM) | , |
| MASTER MODE | | | WEIGHT START POSITION (WEI.POS) | , |
| NUMBER OF SLAVES (nuMSL) | 0 | | WEIGHT LENGTH IN THE STRING (WEI.LEN) | , |
| PROTOCOL TYPE (PROTOC) | EXTENDED | - (| STRING LENGTH (STRL.EN) | , |
| KEYBOARD TYPE (T.KEYB) | DFW FAMILY | - (| DECIMALS (DECI) D | , |
| WEIGHT LIST(WGH.LST) | no | - | STABILITY READINGS (STAB) | , |
| TOTALISER MODE | | | STABILITY INTERVAL (STA.INT) 0 | , |
| TYPE OF TOTAL (tot.Mod) | NORMAL | - (| ENABLE ADDRESS (ADD.EN) YES | |
| NUMBER OF WEIGHTS (MAX.tot) | 0 | | CONTINE OUT(t.out) |) |
| COUNTING MODE | | | | |
| UNIT OF MEASURE PMU (uM.APW) | g | • | 0 | |

New parameter :

Any new parameters in the setup are indicated in red.

This happens if:

- the setup is updated after having read a version of the firmware in which the setup has more parameters than the previous version,
- one imports the .xml file of a setup that has less parameters than of the actual one.

| Setup's management - DFW06 03.06.00 | xx | | | | |
|---------------------------------------|-------------------------|------------|---|------------------------|-----|
| Name Out of range | e value 📃 Shared | value modi | fied New parameter | | |
| k | | | | | |
| F.MODE GENERAL SETUP SCALES SERIA | L PRINTER CONFIGURATION | OUTPU | TS/INPUTS SETPOINTS ANALOG OUTPUT 1 | TARE AND ARCHIVE Notes | |
| FUNCTIONING MODE | | | REFERENCE TIME STABILITY (Wait.t) | 0.0 | 0 |
| FUNCT (FunCt) | NTGS 💌 | 0 | CHECK MODE | | |
| GENERAL SETTINGS | | | CHECK MODE (MPE) | GROSS | 0 |
| BACK LIGHT (LAMP) | LAM 1 | 0 | BEEP NEAR TARGET | NO 💌 | 0 |
| BRIGHT (L.int) | LINT 1 | 0 | PERCENTAGE MODE | | |
| SCREEN SAVER (SCr.SAV) | 0 | 0 | REFERENCE TIME STABILITY (Wait.t) | 0.0 | 0 |
| IN OUT MODE | | | MODE REPEATER | | · |
| IN OUT MODE (tYPE) | GROSS TARE | 0 | STRING TERMINATOR (TERM) | 0 | |
| MASTER MODE | | | WEIGHT START POSITION (WEI.POS) | 0 | • 😧 |
| NUMBER OF SLAVES (nuMSL) | 0 | 0 | WEIGHT LENGTH IN THE STRING (WEI.LEN) | 0 | |
| PROTOCOL TYPE (PROTOC) | EXTENDED 💌 | 0 | STRING LENGTH (STRL.EN) | 0 | • 📀 |
| KEYBOARD TYPE (T.KEYB) | DFW FAMILY | 0 | DECIMALS (DECI) | 0 | |
| WEIGHT LIST(WGH.LST) | no 💌 | | STABILITY READINGS (STAB) | 0 | • 📀 |
| TOTALISER MODE | | | STABILITY INTERVAL (STA.INT) | 0 | • 🕢 |
| TYPE OF TOTAL (tot.Mod) | NORMAL | 0 | ENABLE ADDRESS (ADD.EN) | NO 💌 | |
| NUMBER OF WEIGHTS (MAX.tot) | 0 | 0 | TIME OUT(t.out) | 0.0 | • 🕢 |
| COUNTING MODE | | , | | | |
| UNIT OF MEASURE PMU (uM.APW) | g 💌 | 0 | | | |

- After having modified the desired parameters, save using the "Save" key.
- Press on "Send" to transmit the set-up to the indicator.
- To store the set-up just transmitted, go on the indicator and exit from the set-up environment and confirm with ENTER the saving request.

- To export the setup of the instrument, press the Export key (it is possible to create a .mot file or a .xml file).
- To import the setup of an instrument, press the Import key and select the relative .mot file or .xml file.
- Press "Exit" to exit the Set-up management (the name given to the Set-up will appear in the tree on the left).

NOTES FOR APPROVED INDICATORS

- With the pressing of the "Get" key (setup reception), a message will appear which reminds that the indicator is approved; therefore some parameters may be READ ONLY:



by confirming this message one proceeds with the reception of the setup:

| Setup's management - DFW06 03.06.00 | xx | | | | | |
|-------------------------------------|-----------------------|----------------------|--|--------------------------|---|---------------------------|
| Name Out of rang | ge value 📃 | Shared value modifie | ed 🗾 New parameter | | | |
| 1 | | | | | | |
| F.MODE GENERAL SETUP SCALES SER | IAL PRINTER CONFIGU | RATION OUTPUT | S/INPUTS SETPOINTS ANALOG OUTPUT 1 | TARE AND ARCHIVE Notes | | |
| FUNCTIONING MODE | | | REFERENCE TIME STABILITY (Wait) | 0.0 | 0 | |
| FUNCT (FunCt) | NTGS | <u>~</u> 0 | CHECK MODE | | | |
| GENERAL SETTINGS | | | CHECK MODE (MPE) | GROSS | 0 | |
| BACK LIGHT (LAMP) | LAM 1 | • 0 | BEEP NEAR TARGET | NO 💌 | 0 | |
| BRIGHT (L.int) | LINT 1 | - 0 | PERCENTAGE MODE | | | |
| SCREEN SAVER (SCr.SAV) | 0 | 0 | REFERENCE TIME STABILITY (Wait.t) | 0.0 | 0 | |
| IN OUT MODE | | | MODE REPEATER | | | |
| IN OUT MODE (IYPE) | GROSS TARE | • 0 | STRING TERMINATOR (TERM) | 0 | 0 | |
| MASTER MODE | | | WEIGHT START POSITION (WEI.POS) | 0 | 0 | |
| NUMBER OF SLAVES (nuMSL) | 0 | 0 | WEIGHT LENGTH IN THE STRING (WEI.LEN) | 2000 A | 0 | |
| PROTOCOL TYPE (PROTOC) | EXTENDED | - 0 | STRING LENGTH (STRLEN) | 0 | 0 | |
| KEYBOARD TYPE (T.KEYB) | DFW FAMILY | . 0 | DECIMALS (DECI) | 0 | 0 | |
| WEIGHT LIST(WGH.LST) | no | - | STABILITY READINGS (STAB) | 0 | 0 | |
| TOTALISER MODE | 1 | | STABILITY INTERVAL (STA.INT) | 0 | 0 | |
| TYPE OF TOTAL (tot.Mod) | NORMAL | • 0 | | NO V | | |
| NUMBER OF WEIGHTS (MAX.tot) | 0 | | TIME OUT(Lout) | 0.0 | 0 | |
| COUNTING MODE | 1 | | | | • | |
| UNIT OF MEASURE PMU (uM.APW) | 9 | • 0 | | | | |
| | 1a | <u> </u> | | | | |
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| Send 🔣 Get 📷 Export | Import Calibra | ation M | | | | <u>S</u> ave <u>E</u> xit |
| | | - | | | | |

As one may note, the metrological parameters are read only, and a "M" to indicate that the setup is of an approved indicator.

It's necessary to carry out a reception of the setup before transmitting with the "Send" key; a message will appear with "Get".

The changes made through the calibration tool, even if transmitted, will have no effect.

9.4.2 CALIBRATION OF THE INDICATOR

PREMISE: With a calibration done with a different channel mode in respect to the one set on the indicator in the "type" step (independent channels instead of dependent) or with a number of different channels in respect to those set on the indicator (for example 4 channels instead of 1), one should set these parameters also on the indicator transmitting the set-up. For the setup transmission refer to the previous section.

PROCEDURE

By pressing on the "Calibration" key, or on the TOOLS >> CALIBRATION TOOL menu, a programme opens up which allows to calibrate from the PC (Calibration Tool 1 or Calibration Tool 2 depending on the type of instrument); the metrological data used (capacity, division, decimal point, etc...) are those previously configured in the "General Setup" and "Scales" screens.

If there is not a connected scale or the communication is disabled, by pressing the "Calibration" key the program appropriate for the instrument to which the setup is referred opens up; by pressing on the TOOLS >> CALIBRATION TOOL menu the following screen is displayed, which allows to select the type of Calibration Tool (it is also indicated with which instruments the two types of Calibration Tool have to be used):



9.4.2.1 CALIBRATION WITH CALIBRATION TOOL 1

The programme offers various possibilities:

- Calibration with Sample Weights
- Zero Calibration
- Theoretic Calibration
- Pre-calibration of the indicator

To facilitate the operations, the programme is fitted of a "wizard" function which guides the user step by step:

| etup's management - 3590M301 08.0 | 00.04 UK | | | | |
|--------------------------------------|-------------------------|---|--|------------|---------------------------|
| Name | | | | | |
| SETUP1 | | | | | |
| F.MODE GENERAL SETUP SCALES SE | RIAL REMOTE SCALE (| DUTPUTS/INPUTS SETPOINTS ANALOG OUT | PUT READER AND AI CODE Notes | 1 | |
| GENERAL KEYS SETTINGS | 1 | ARCHIVES | 1 | | |
| F1 F6 (F. KEYS) | [automatica | | - | | |
| | ENABLE | | ENABLED | <u>·</u> 0 | |
| O T SHF SWITCH (F. KEYS) | ENABLE | 0 | kg | <u> </u> | |
| PRN C ENT i (F. KEYS) | ENABLE | DECIMALS Calibration Tool v. 1.09 [Set | un from DimiToolel | <u> </u> | |
| KEYS 0.9 (F. KEYS) | ENABLE | File Connection Send/receive C | | <u> </u> | |
| GENERAL SETTINGS | | Scale | | 0 | |
| REACTIVATIONS (REACT.) | ALWAYS | | Weight | | |
| TARE RESTORATION (RES.TAR) | DISABLE | | | 0 | |
| START UP LCD TEXT (LOGO) | HELLO | 6 50% - | | 0 | |
| TOTAL | | | | 0 | |
| TOTALIZER FUNCTION MODE (EXE.TOT) | MANUAL | | mV/V ADC | | |
| TOTALIZER DELAY (DLY.TOT) | 0.0 | | W1 W2 W3 W3 | 0 | |
| TOTALIZER TYPE (TOT.TYP) | LOAD | | | 0 | |
| TARE CONFIGURATION (TARE) | ENAP | Connected: 3590M301 8.0 | 0 | | |
| TARE AFTER TOT. (T.TOT.) | MAN Calibrati | on Tool Wizard | | | |
| | | Selec | t the operation to execut press the Next button | e and | |
| | | ۲ | Real calibration | | |
| | | 0 | Zero calibration | | |
| | | 0 | Theoretical calibration | | |
| | | 0 | Equalization | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | Show at : | start up | < Back Next > | Exit | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Send Get Export | Import Calit | bration | | | <u>S</u> ave <u>Exi</u> t |

For the expert ones, it is possible to exit the Wizard through the "Exit" key and not view the Wizard at each programme start-up by unselecting "Show at start-up".

9.4.2.1.1 CALIBRATION WITH SAMPLE WEIGHTS ("REAL CALIBRATION")

USE WITH THE WIZARD

1) Select "Real Calibration" and press on "Next"; the following appears:

| 🔞 Calibration Tool Wizard | |
|---------------------------|--|
| | Channel selection |
| | Select the first channel to calibrate and press the Next button |
| Real calibration | |
| Channel selection | 💽 Channel 1 |
| Scale connection | Channel 2 |
| Setup parameters | |
| Calibration points | 🔿 Channel 3 |
| Zero Acquisition | 🔿 Channel 4 |
| Point | |
| Acquisition Point | |
| Terminated | |
| Show at start up | < Back Next > Exit |

2) Select the first channel to be calibrated.

NOTE: if the scale is with dependent channels, select always "Channel 1".

3) Pressing on "Ahead", the following appears:

| 😵 Calibration Tool Wizard | | × |
|--|--|---|
| | Scale connection | |
| Real calibration Channel selection Scale connection Setup parameters Calibration points Zero Acquisition Point Acquisition Point | Scale connection under way. Please wait | |
| Terminated | | |
| Show at start up | < Back Next > Exit | |

After which the following appears:

| 😵 Calibration Tool Wizard | |
|---|---|
| | Setup parameters |
| | Select the operation to execute and press the Next button |
| Real calibrationChannel selectionScale connectionSetup parametersCalibration pointsZero AcquisitionPointAcquisition PointTerminated | Receive setup from scale Load setup from file Check the parameters of the present setup |
| Show at start up | < Back Next > Exit |

- By selecting "Receive setup from scale" and pressing on "Next" it is possible to receive the metrological and calibration parameters directly from the scale.
- By selecting "Load setup from file" it's possible to import the data from a ".mot" file exported previously:

| ® Calibration Tool Wizard | |
|---|-------------------------|
| | Setup parameters |
| | Select the file to load |
| Real calibration Channel selection Scale connection Setup parameters State connection | |
| Calibration points Zero Acquisition Point Acquisition Point Terminated | |
| Show at start up | < Back Next > Exit |

- Press on the "..." key to search the file in the desired directory and press on "Next" to continue.
- By selecting instead "Check the parameters of the present setup" and pressing on "Next" it's possible to check and eventually modify the parameters already stored on the PC:

| 😵 Calibration Tool Wizard | | × |
|---|--|---|
| | Setup parameters | |
| | Check the parameters and change them if necessary, then press the Next button to go on | |
| Real calibration Channel selection Scale connection Setup parameters Calibration points Zero Acquisition Point Acquisition Point Terminated | Decimal point 3 Change Unit of measure kg Change Division 1 Change Capacity 0,000 kg Change Single range Multi range Multi division Change | |
| Show at start up | < Back Next > Exit | |

- By pressing on the "Change" key one modifies the relative parameter: Decimal point Unit of measure Division Capacity Single range Multi range
 - Multi division
- 4) Press on "Next" to continue:

| ® Calibration Tool Wizard | |
|--|--|
| | Calibration |
| Real calibration | Select the number of calibration points other than the zero and press Next |
| Channel selection Scale connection Setup parameters Calibration points Zero Acquisition Point | 1 V 1 2 3 4 5 6 7 |
| Acquisition Point Terminated Show at start up | <pre>8</pre> |

5) Set the number of calibration points (except for the scale zero) and press on "Next" to continue:

| 😵 Calibration Tool Wizard | |
|---|--|
| | Calibration |
| Real calibration Channel selection Scale connection Setup parameters Calibration points | Zero acquisition. Unload the platform and press the Next buton. |
| Zero Acquisition | |
| Point | |
| Acquisition Point | |
| Terminated | |
| Show at start up | < Back Next > Exit |

6) The programme is ready to acquire the scale zero; unload the scale and press on "Next"; the following will appear:

| Setup's management - 3590M301 08.00.04 UK | | | × |
|---|---------------------------------------|---|-----------|
| Name | | | |
| SETUPI | | | |
| F.MODE GENERAL SETUP SCALES SERIAL REN | IOTE SCALE OUTPUTS/INPUT | S SETPOINTS ANALOG OUTPUT READER AND AI CODE Notes | |
| WARM UP TIME | 0 | | |
| AUTO ZERO (AUTO 0) | | | |
| INSTRUMENT TYPE (TYPE) | н. 🕑 🥝 | | |
| DIRECT SALE (D.SALE) NO | - 0 | | |
| SETUP PASSWORD DISA | | ibration Tool v. 1.09 [Setup from DiniTools]* Connection Send/receive Configuration Tools Help | |
| PASSWORD | 6 | | |
| AUTO SWITCH OFF (POW.OFF) DISA | BLED 🔄 🌚 | cale | |
| INDICATION OF BATTERY LEVELS (BT.STAT) | | | |
| LOCKED TARE (T.LOCK) | LE 🗹 🤘 🖣 | | |
| NUMBER OF SCALES (NUM.SCA) | | →0<- → mV/V 0,02949 ADC 31665 | |
| | | | |
| | | | |
| | | Connected: 3590M301 8.00 | |
| | ® Calibration Tool Wizar | | |
| | | Calibration | |
| | | Calibration | |
| | X | | |
| | Real calibration | | |
| | Channel selection Scale connection | Zero acquisition under way. | |
| | Setup parameters | Please wait | |
| | Calibration points | | |
| | Zero Acquisition | | |
| | Point Acquisition Point | | |
| | Acquisition Point Terminated | | |
| | | | |
| | Show at start up | < Back Next > Cancel | |
| | | | |
| | | | |
| | | | |
| | | | |
| Send Get Export Impo | Calibration | | Save Exit |

then appears:

| 🔞 Calibration Tool Wizard | × |
|---|---|
| | Calibration |
| | Acquisition of point 1. Insert the weight value. |
| Real calibrationChannel selectionScale connectionSetup parametersCalibration pointsZero AcquisitionPoint 1/1Acquisition Point 1/1Terminated | 2,000 kg |
| Show at start up | < Back Next > Exit |

7) Enter the calibration weight value (in the example it's 2,000 kg) and press on "Next"; the following will appear:

| Calibration Tool Wizard | | | |
|---|--|--|--|
| Calibration | | | |
| Real calibration Channel selection Scale connection Setup parameters Calibration points | Acquisition of point 1. Load the platform with 2,000 kg and press the Next button. | | |
| Zero Acquisition | | | |
| Point 1/1 | | | |
| Acquisition Point 1/1 | | | |
| Terminated | | | |
| Show at start up | < Back Next > Exit | | |

8) The programme is ready to acquire the point number 1; put on the scale the weight set previously and press on "Next"; the following appears:

| Setup's management - 3590M301 08.00.04 UK | | | × |
|--|--|---|-----------|
| Name | | | |
| SETUPI | | | |
| F.MODE GENERAL SETUP SCALES SERIAL REM | 10TE SCALE OUTPUTS/IN | PUTS SETPOINTS ANALOG OUTPUT READER AND AI CODE Notes | |
| WARM UP TIME | 6 | | |
| AUTO ZERO (AUTO 0) | | | |
| INSTRUMENT TYPE (TYPE) | | | |
| DIRECT SALE (D.SALE) | ~ 6 | | |
| SETUP PASSWORD DISAE | | Calibration Tool v. 1.09 [Setup from DiniTools]* | |
| PASSWORD | 6 | File Connection Send/receive Configuration Tools Help | |
| AUTO SWITCH OFF (POW.OFF) | BLED 🔄 🍯 | Scale | |
| INDICATION OF BATTERY LEVELS (BT.STAT) | BLED BLED BLED BLE BLE BLE BLE BLE BLE BLE BLE | | |
| LOCKED TARE (T.LOCK) | LE 🔽 😴 | | |
| NUMBER OF SCALES (NUM.SCA) | - 6 | | |
| | | →0<· ◆ ~ ◆ mV/V 0,16289 ADC 174901 | |
| | | Ch UL ● OL ● W1 | |
| | | Connected: 3590M301 8.00 | |
| | 8 Calibration Tool W | | |
| | Calibration foot in | | |
| | | Calibration | |
| | X | | |
| | Real calibration | | |
| | Channel selection | Acquisition of point 1 under way. | |
| | Scale connection Setup parameters | Please wait | |
| | Calibration points | | |
| | Zero Acquisition | | |
| | Point 1/1 | | |
| | Acquisition Point 1/1 Terminated | | |
| | | | |
| | 🗹 Show at start up | < Back Next > Cancel | |
| | | | |
| | | | |
| | | | |
| · | | | |
| Send Get Export Impor | t | | Save Exit |

9) Repeat the operation for all the set calibration points; at the end of the last point, the calibration of the first channel has been completed:

| 🚯 Calibration Tool Wizar | d | X | | | |
|---|---|---|--|--|--|
| Channel selection | | | | | |
| | Select the next channel to calibrate and press the Next button | | | | |
| Real calibrationChannel selectionScale connectionSetup parametersCalibration pointsZero AcquisitionPointAcquisition PointTerminated | Channel 1 Channel 2 Channel 3 Channel 4 Terminate calibration | | | | |
| Show at start up | < Back Next > Exit | | | | |

10) Repeat the operation for the desired channels at the end of the last channel, select "End calibration":

| 😵 Calibration Tool Wizard | | | | |
|--|--|--|--|--|
| Calibration terminated successfully | | | | |
| Real calibration | In order for the calibration to be effective it is necessary to send it to the scale. Select the operation to execute and press the Next button | | | |
| Channel selection Scale connection Setup parameters Calibration points Zero Acquisition Point Acquisition Point Terminated | Transmit setup to the scale Close Wizard Restart Wizard | | | |
| Show at start up | < Back Next > Exit | | | |

11) At this point it's possible to:

- Transmit only the calibration data to the indicator ("Transmit setup to the scale").
- Close the Wizard ("Close Wizard"): see point 12)
- o Restart from the beginning ("Restart Wizard").

12) Press "Next" to continue.

13) If one has selected "Transmit setup to the scale", the following appears:

| 😵 Calibration Tool Wizard | |
|---------------------------|-------------------------------|
| | Setup transmission |
| | |
| Real calibration | |
| Channel selection | Setup transmission under way. |
| Scale connection | Please wait |
| Setup parameters | |
| Calibration points | |
| Zero Acquisition | |
| Point | |
| Acquisition Point | |
| Terminated | |
| Show at start up | < Back Next > Exit |

Then the following appears:

| 😵 Calibration Tool Wizard | | | | |
|---|--|--|--|--|
| Calibration terminated successfully | | | | |
| | The scale is now calibrated. Select the operation to execute and press the End button. | | | |
| Real calibrationChannel selectionScale connectionSetup parametersCalibration pointsZero AcquisitionPointAcquisition Point | ⊙ Close Wizard ○ Restart Wizard | | | |
| Terminated | | | | |
| Show at start up | < Back End Exit | | | |

14) Select whether to close the Wizard ("Close Wizard") or restart from the beginning ("Restart Wizard") and press on "End".

15) By closing the Wizard the complete calibration programme appears (see the "<u>USE WITHOUT WIZARD</u>" section):

| Calibration Tool v. 1.09 | | | M301 8.00] | | |
|--|------------------|------------|-----------------|-----------|--------------------|
| Discon Open Save | Print Rec | ceive Send | Configure W | izard Abo | Dut Exit |
| | _ ⁹ | Scale | 3 | Weight | Edit |
| Channel 01 02 03 04 Zero Show zero tracking Zero: Disabled $\rightarrow 0c$ Cancel zero Ch | | | | | |
| Setup parameters ADC pre cali | bration Equaliza | | L | | |
| Supply 5 | v | Points | tion parameters | - | |
| Theoretical calibration Load cells Average output | mV/V | Zero | Weight (kg) | | ADC value 31667 |
| Total capacity | kg | Point 1 | 2,000 | 0,16289 | 174900 |
| r Dead load | | Point 2 | 0,000 | 0,00000 | 0 |
| Value | ⊙ kg | Point 3 | 0,000 | 0,00000 | 0 |
| Capture | OmV OmV∕V | Point 4 | 0,000 | 0,00000 | 0 |
| | | Point 5 | 0,000 | 0,00000 | D |
| Calculate | J | Point 6 | 0,000 | 0,00000 | 0 |
| Sensitivity | | Point 7 | 0,000 | 0,00000 | 0 |
| pts/div uV/div 72 0,33349 | mV/V | Point 8 | 0,000 | 0,00000 | 0 |
| Connected: 3590M301 8 | .00 | TOANS | | | |

- 16) Press on the "Exit" key in the upper right to close the programme and return to "Setup's management".
- 17) By pressing now the "Save" key in the "Setup's management", one stores on PC the calibration just made. By transmitting the setup ("Send" key) the calibration will be transmitted together will the other scale parameters.

USE WITHOUT WIZARD



Dpen

ⁿ Connect / Disconnect the programme

Opens an existing configuration from a ".mot" file.



Saves the configuration in a ".mot" file.

Print

Allows to print the configuration.



Receives / Transmits the calibration and the metrological data to the scale.



Configure Settings of the programme:

| | Calibration Tool | |
|--|------------------|--|
| Serial port | Configuration | Automatic selection of the serial port |
| Forces the communication at 9600 baud.** | Always 9600 baud | Language |
| "Normal" or "Expert" mode | User Expert | |

** To optimise the data transmission speed, the baud rate is instantaneously set at 115200 and then brought back at 9600; in case of communication problems (for example by using the simulated serial ports through USB) one can **force the baud rate always at 9600**.



Wizard Enable the "Wizard" guide previously described.

| \oslash | |
|-----------|--|
| About | |

About Information about the product.



Allows to exit the programme.

Show zero tracking Zero: Disabled Allows to enable the zero tracking on the basis of the value configured in the set-up and display the cleared weight percentile in relation to the configured capacity.

->0<- Clears the present weight if it's within +/- 2% of the capacity.

Cancel zero Cancels the zero manually as well as the one due to the zero tracking.

"NORMAL" MODE

Refer to the section marked in the screen below.



Procedure:

- 1) Select the scale to be calibrated in the "Channel" section: 1, 2, 3, 4. NOTE: if the scale is with dependent channels, always select "1".
- 2) Click on the white box next to "Zero" (acquisition of the scale zero).
- 3) Click on "Capture point":



Confirm the dotted box; then the following will appear:



4) Unload the scale and confirm with OK; then the following screen will appear:

| Calibration Tool |
|--|
| Zero acquisition under way. Please wait |
| Cancel |
| Calibration Tool |
| Capture successful |

- 5) Click on the white box next to "Point 1" (first calibration point)
- 6) Click on "Capture point":



7) Confirm the dotted box; then the following will appear:

| Calibration Tool | × |
|---|---|
| Weight (kg) related to the point to be acquired | |
| 2,000 | |
| OK Cancel | |

8) Enter the value of the weight be acquired and confirm the "**OK**"; the following appears:



9) Load onto the scale the corresponding weight and confirm the "**OK**"; the following appears:



- 10) Confirm the "OK".
- 11) To add another calibration point press on "Add Point":



- 12) By confirming the window one enters the second calibration point, in the same way as the first point [see points from 6) to 9)].
- 13) To transmit only the calibration and the metrological data, click on the "Send" key above; to transmit all the setup parameters, one should exit the calibration programme and use the "Send" key of the "Setup management" of Dinitools (see section 9.4.1.1).

NOTES

- 1. One can carry out up to 8 calibration points.
- 2. Click on "Delete Point" to cancel a calibration point (it isn't possible to cancel point 1).
- 3. Click on "Modify weight" to change the weight value of a point, without touching the relative mV/V.

"EXPERT" MODE

This mode allows a greater freedom to modify the calibration points; refer to the sections marked in the screen below.

| Connection Send/receiy | e Configuration 1 | Tools <u>H</u> elp | | | |
|---|-----------------------------------|---|--|--|---|
| 🕉 🛅 💾 | Print Rec | eive Send | Configure W | izard Ab | Dut Exit |
| | S | cale | | Weight | 🛄 Edit |
| Channel 100% - 2 3 4 2ero 3 4 50% - 50% - 2 0000 kg Show zero tracking Zero: Disabled ->0<- ~ • | | | | | |
| tup parameters ADC pre | calibration Equalizat | tion Calibration | 1 | | |
| Load cells Supply 5 | v | Setup calibra | tion parameters | Non pre | calibrated ADC |
| Load cells Supply 5 Theoretical calibration | | | tion parameters | | calibrated ADC |
| Load cells Supply 5 | | Setup calibra Points | | Non pre mV/V 0,02949 | ADC value |
| Load cells Supply 5 Theoretical calibration Load cells | V | Setup calibra | tion parameters 1 Weight (kg) | mV/V | ADC value |
| Load cells Supply 5 Theoretical calibration Load cells Average output Total capacity | V mV/V | Setup calibra Points Zero | tion parameters 1 Weight (kg) 0,000 | mV/∨ 0,02949 | ADC value 31667 |
| Load cells Supply 5 Theoretical calibration Load cells Average output | V mV/V kg ⊙kg | Setup calibra Points Zero Point 1 | tion parameters 1 Weight (kg) 0,000 2,000 | mV/V 0,02949 0,16289 | ADC value 31667 174900 |
| Load cells Supply 5 Theoretical calibration Load cells Average output Total capacity Dead load | V mV/V kg • kg • mV | Setup calibra Points Zero Point 1 Point 2 | tion parameters 1 Weight (kg) 0,000 2,000 0,000 | mV/V 0,02949 0,16289 0,00000 | ADC value 31667 174900 |
| Load cells Supply 5 Theoretical calibration Load cells Average output Total capacity Dead load Value | V mV/V kg ⊙kg | Setup calibra Points Zero Point 1 Point 2 Point 3 | tion parameters 1 Weight (kg) 0,000 2,000 0,000 0,000 | mV/V 0,02949 0,16289 0,00000 0,00000 | ADC value 31667 174900 0 |
| Load cells Supply 5 Theoretical calibration Load cells Average output Total capacity Dead load Value | V mV/V kg 0 mV 0 mV/V | Setup calibra Points Zero Point 1 Point 2 Point 3 Point 4 | tion parameters 1 Weight (kg) 0,000 2,000 0,000 0,000 0,000 0,000 | mV/V 0,02949 0,16289 0,00000 0,00000 0,00000 | ADC value 31667 174900 0 0 |
| Load cells Supply 5 Theoretical calibration Load cells Average output Total capacity Dead load Value Capture Calculate | V mV/V kg 0 mV 0 mV/V | Setup calibra Points Zero Point 1 Point 2 Point 3 Point 4 Point 5 | tion parameters 1 Weight (kg) 0,000 2,000 0,000 0,000 0,000 0,000 0,000 0,000 | mV/V 0,02949 0,16289 0,00000 0,00000 0,00000 | ADC value 31667 174900 0 0 0 |
| Load cells Supply 5 Theoretical calibration Load cells Average output Total capacity Dead load Value Capture | V mV/V kg 0 mV 0 mV/V | Setup calibra Points Zero Point 1 Point 2 Point 3 Point 4 Point 5 Point 6 | tion parameters 1 Weight (kg) 0,000 2,000 0,000 0,000 0,000 0,000 0,000 | mV/V 0,02949 0,16289 0,00000 0,00000 0,00000 0,00000 | ADC value 31667 174900 0 0 0 0 0 |

Procedure:

- 1) Select the scale to be calibrated in the "Channel" section: 1, 2, 3, 4. NOTE: if the scale is with dependent channels, select always "1".
- 2) Put on the scale the weight to be acquired (to make the zero, unload the scale): in the "mV/V" and "ADC value" fields one will view the corresponding value.
- 3) Point the mouse next to the screen which shows the weight:



4) By keeping the left key of the mouse clicked, drag it until it's next to the point to be acquired: by releasing the key, the following window will appear:

| _ | Overwrite Overwrite locked |
|---|-------------------------------|
| _ | Insert |
| x | Cancel |

- By clicking on "Overwrite", the mV/V values and the converter points are overwritten without changing the other points.
- By clicking on "Overwrite locked", the mV/V values and the converter points are overwritten without proportionally changing the other points.
- By clicking on "Insert", the mV/V values and the converter points are entered in a new point in the position previous to the selected one.
- By clicking on "Cancel", the operation is cancelled.
- 5) By clicking on the "**Weight**" white box next to the desired point, it will be possible to enter the weight value; furthermore by clicking on the "**mV/V**" or "**ADC value**" box, it is possible to modify the millivolt or converter points value.
- 6) To enter a point, click on the right key of the mouse on the calibration point and select "Insert point" (it will be inserted in the previous position); to cancel a point select "Delete point".



7) To transmit only the calibration and the metrological data, click on the "Send" key above; to transmit all the setup parameters, one should exit the calibration programme and use the "Send" key of the "Setup management" of the Dinitools (see section 8.2.4).

NOTE: by selecting the **"Edit"** box it's possible to type from the PC keyboard any weight value and see the corresponding mV/V value (and the converter points), taking into consideration the present calibration as a reference; by unselecting the box one can return to the standard functioning.



9.4.2.1.2 "ZERO CALIBRATION"

The zero calibration allows to carry out a new zero point without completely recalibrating the scale (the other points are proportionally altered); it's therefore necessary that the scale is already calibrated.

USE WITH WIZARD

1) By selecting "Zero Calibration" and press on "Next", the following appears:

| 😵 Calibration Tool Wizard | | |
|--|--|--|
| Channel selection | | |
| Zero calibration | Select the first channel to calibrate and press the Next button | |
| Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Channel 1 Channel 2 Channel 3 Channel 4 | |
| Show at start up | < Back Next > Exit | |

2) Select the first channel to be calibrated.

NOTE: if the scale is with dependent channels, select always "Channel 1".

3) By pressing on "Next", the following appears:

| 8 Calibration Tool Wizard | | |
|---|--|--|
| Scale connection | | |
| Zero calibration Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Scale connection under way. Please wait | |
| Show at start up | < Back Next > Exit | |
Then the following appears:

| 😵 Calibration Tool Wizard | | × |
|--|--|---|
| | Setup parameters | |
| Zero calibration | Select the operation to execute and press the Next button | |
| Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Receive setup from scale Load setup from file Go to zero calibration | |
| Show at start up | < Back Next > Exit | |

- 4) By selecting "**Receive setup from scale**" and pressing on "**Next**" it's possible to receive the metrological and calibration parameters directly from the scale.
- 5) By selecting "Load setup from file" it's possible to import the data from a previously exported ".mot" file (see point 3 of the section 9.4.2.1.1 "Calibration with sample weights", "<u>USE WITH WIZARD"</u>).
- 6) By selecting "Go to zero calibration" and pressing on "Next", one proceeds with the zero calibration:

| 😵 Calibration Tool Wizard | | × |
|--|---|---|
| | Zero Acquisition | |
| Zero calibration Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Unload the platform and press the Next button | |
| Show at start up | < Back Next > Exit | |

7) Unload the scale and press on "Next"; the following appears:

| Setup's management - 3590M301 08.00.04 U | ĸ | | | | | × |
|--|--|-----------------------------------|---|-------|------|------|
| Name | | | | | | |
| SETUPI | | | | | | |
| F.MODE GENERAL SETUP SCALES SERIAL RE | EMOTE SCALE OUTPUTS/INP | UTS SETPOINTS ANALOG OUTPU | T READER AND AI CODE Notes | | | |
| GENERAL KEYS SETTINGS | | ARCHIVES | | | | |
| F1 F6 (F. KEYS) | ABLE 🔄 🧭 | ENABLE | ENABLED | . 0 | | |
| | ABLE 🖸 🥝 | UNIT OF MEASURE | | 2 0 | | |
| | ABLE | DECIMALS | | 0 | | |
| | ABLE | Calibration Tool v. 1.09 [Setup | from DiniToole1* | 2 0 | | |
| GENERAL SETTINGS | | File Connection Send/receive Conf | iguration Tools Help - | 0 | | |
| | VAYS 🗹 🧧 | Scale | | | | |
| Contractores to business of the second | VAYS 🔽 🤄 | | | 0 | | |
| and the second | 1ELLO | | | 0 | | |
| TOTAL | Contraction of the second seco | | | ő | | |
| | NUAL 🔄 🧧 | ->0<· 🔴 🔷 🌢 | mV/V 0,16290 ADC 174910 | 0 | | |
| TOTALIZER DELAY (DLY.TOT) | 6 | | W1 W2 W3 W | 0 | | |
| TOTALIZER TYPE (TOT. TYP) | | | | 0 | | |
| TARE CONFIGURATION (TARE) | | Connected: 3590M301 8.00 | | 9 | | |
| TARE AFTER TOT. (T.TOT.) | Calibration Tool Wize | ard | | | | |
| CONFIRMATION OF TOTAL RESET (RESET) | | Zero Aco | nuisition | | | |
| | Zero calibration Channel selection Scale connection Setup parameters Zero Acquisition Terminated | | o acquisition under way. Please wait | | | |
| | Show at start up | | ack Next > C | ancel | | |
| Send Giet Export Imp | ort Calibration | | | | Save | Exit |
| seru det Expôrt Imp | Laibration | | | | Save | Exit |

8) The zero calibration of the first channel is completed:

| 🚯 Calibration Tool Wizar | d | × |
|---|---|---|
| | Channel selection | |
| Zero calibration | Select the next channel to calibrate and press the Next button | |
| Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Channel 1 Channel 2 Channel 3 Channel 4 Terminate calibration | |
| Show at start up | < <u>B</u> ack <u>N</u> ext > <u>Exit</u> | |

9) Repeat the operation for the desired channels; at the end of the last channel, select "End calibration":

| 🔞 Calibration Tool Wizard | |
|---|--|
| Zero cali | bration terminated successfully |
| Zero calibration Channel selection Scale connection Setup parameters Zero Acquisition Terminated | In order for the zero calibration to be effective it is necessary to send it to the scale. Select the operation to execute and press the Next button Transmit setup to the scale Close Wizard Restart Wizard |
| Show at start up | < Back Next > Exit |

10) At this point it's possible to:

- Transmit only the calibration data to the indicator ("Transmit setup to the scale").
- Close the Wizard ("Close Wizard").
- o Restart from the beginning ("Restart Wizard").
- 11) Press "Next" to continue.
- 12) If one has selected "Transmit setup to the scale":

| 🚯 Calibration Tool Wizard | |
|--|--|
| | Setup transmission |
| Zero calibration Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Setup transmission under way. Please wait |
| Show at start up | < Back Next > Exit |

Then the following appears:

| 🕲 Calibration Tool Wizard | X |
|--|--|
| Zero calib | ration terminated successfully |
| Zero calibration | The scale is now recalibrated. Select the operation to execute and press the End button. |
| Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Close Wizard Restart Wizard |
| Show at start up | < Back End Exit |

13) See from point 16) of the section 9.4.2.1.1 "Calibration with sample weights", "USE WITH WIZARD".

USE WITHOUT WIZARD

"NORMAL" MODE

| Connection Send/receive | Configuration | Tools <u>H</u> elp | 1 (mark) | 0.4 | |
|---|--------------------------|------------------------------|-------------------------|--|--|
| iscon Open Save | Print Rec | eive Send | Configure | Wizard Abor | ut Exit |
| | S | cale | | Weight | |
| | | 00% - 50% - 0% - Ch | :•● ~ -● OL | 2,0 mV/V 0.1 W1 = | 6286 W2 = W3 = |
| etup parameters ADC pre ca | alibration Equalizat | tion Calibration | | | |
| 1 1 1 | | | | | |
| Load cells Supply 5 | v | Setup calibra | tion parameter | | |
| Supply 5 | V | Points | tion parameter | | calibrated ADC |
| Supply 5 Theoretical calibration Load cells | V mV/V | Points | 1 Weight (F | <mark>Non pre</mark> <g) mv="" td="" v<=""><td>calibrated ADC</td></g)> | calibrated ADC |
| Supply 5 Theoretical calibration | | a service de la contracte | 1 | Non pre | Capture Point |
| Supply 5 Theoretical calibration Load cells Total output Total capacity | mV/V | Points Zero | 1 Weight (K 0,000 | Non pre (g) mV/V 0,02949 | |
| Supply 5 Theoretical calibration Load cells Total output | mV/V kg ⊙kg | Points Zero | 1 Weight (K 0,000 | Non pre (g) mV/V 0,02949 | Capture Point Delete Point |
| Supply 5 Theoretical calibration Load cells Total output Total capacity Dead load | mV/V kg | Points Zero | 1 Weight (K 0,000 | Non pre (g) mV/V 0,02949 | Capture Point Delete Point Add Point |
| Supply 5 Theoretical calibration Load cells Total output Total capacity Dead load Value Capture | mV/V kg ⊙kg ⊙mV | Points Zero | 1 Weight (K 0,000 | Non pre (g) mV/V 0,02949 | Capture Point Delete Point |
| Supply 5 Theoretical calibration Load cells Total output Total capacity Dead load Value Capture Calculate | mV/V kg ⊙kg ⊙mV | Points Zero | 1 Weight (K 0,000 | Non pre (g) mV/V 0,02949 | Capture Point Delete Point Add Point |
| Supply 5 Theoretical calibration Load cells Total output Total capacity Dead load Value Capture | mV/V kg ⊙kg ⊙mV | Points Zero | 1 Weight (K 0,000 | Non pre (g) mV/V 0,02949 | Capture Point Delete Point Add Point Zero Calibration |

Procedure:

1) Press on the "Zero calibration" key; the following window will appear:



Confirm the window to proceed.

2) Unload the scale and confirm the following window:



3) After a few instants the new zero point is acquired:



- 4) By confirming with **OK** one returns in the programme.
- 5) To only transmit the calibration and the metrological data, click on the "**Send**" key above; to transmit all the parameters of the setup, one should exit the calibration programme and use the "**Send**" key of the "**Setup** management" of Dinitools (see section 9.4.1.1).

9.4.2.1.3 "THEORETICAL CALIBRATION"

The theoretical calibration allows to calibrate the scale without the use of sample weights and is useful when it's impossible to put these weights on the weighing system (for example in the silos); by entering the system data in the programme (excitation of the load cells, mV/(V value, total capacity of the load cells), the programme calculates in relation to the set capacity/division. Consequently the accuracy of the calibration depends on the correctness and accuracy of the entered data.

NOTE: Please take note that isn't possible to obtain the same accuracy of the calibration with the sample weights.

USE WITH WIZARD

1) Select "**Theoretical Calibration**" and press on "**Next**"; the following appears:

| 😵 Calibration Tool Wizard | |
|--|--|
| | Channel selection |
| | Select the first channel to calibrate and press the Next button |
| Theoretical calibration | |
| Channel selection Setup parameters mV/V Cells capacity Dead load Terminated | Channel 1 Channel 2 Channel 3 Channel 4 |
| Show at start up | < Back Next > Exit |

- 2) Select the first channel to be calibrated.
- NOTE: if the scale is with dependent channels, select always "Channel 1".
- 3) By pressing on "Next", the following appears

| 😵 Calibration Tool Wizard | | × |
|---|---|---|
| | Setup parameters | |
| | Select the operation to execute and press the Next button | |
| Theoretical calibration Channel selection Setup parameters mV/V Cells capacity Dead load Terminated | Receive setup from scale Load setup from file Check the parameters of the present setup | |
| Show at start up | < Back Next > Exit | |

- 4) By selecting "Receive setup from scale" and pressing on "Next" it's possible to receive the metrological and calibration parameters directly from the scale.
- 5) By selecting "Load setup from file" it's possible to import the data from a previously exported ".mot" file (see point 3) of the section 9.4.2.1.1 "Calibration with the sample weights", "USE WITH WIZARD").
- 6) By selecting "Check the parameters of the present setup" and pressing on "Next" it's possible to check and eventually modify the parameters already stored on the PC (see points 5 - 6 of the section 9.4.2.1.1 "Calibration with the sample weights", "USE WITH WIZARD").

7) Press on "Next" to continue:

| Calibration Tool Wizard | | × |
|--|---|---|
| | Theoretical calibration | |
| | Insert the load cell's output. With dependent channels insert the total load cells' output. | |
| Theoretical calibration Channel selection | 2,0003 mV/V Calculate | |
| Setup parameters mV/V | | |
| Cells capacity | | |
| Dead load Terminated | | |
| | | |
| Show at start up | < Back Next > Exit | |

8) With Independent channels application, enter the mV/V value of the load cell; with various load cells equalised through the external junction box, enter the average of the signals. With a **Dependent channels** application, enter the sum of the mV/V of the connected load cells.

By pressing on "Calculate" it's possible to make the sum from PC:

| \delta Calibratio | n Tool | | × |
|----------------------------|---------|--------|---|
| Average load cells' output | | | |
| Average | 0,00000 | mV/V | |
| Cell 1 | 2,00010 | mV/V | |
| | | | |
| | | | |
| | Clear | l | |
| ОК | | Cancel |] |

Enter the mV/V value in the "**Cell 1**" field and press **ENTER** on the PC keyboard to enter the value of the second load cell:

| 🗞 Calibration Tool 📃 | | | | |
|----------------------|---------------|-------------------|--|--|
| Avera | ge load cells | s' output | | |
| Average | 2,00010 |] mV/V | | |
| Cell 1 | 2,00010 | mV/V | | |
| Cell 2 | 2,00020 🛛 | ¹ mV/V | | |
| | Clear |) | | |
| ОК |] | Cancel | | |

Continue in the same way for the other connected channels (with the x of the field one cancels).

By confirming with **OK**, the total value in the field will appear.

| Calibration Tool Wizard | X |
|-------------------------|----------------------------------|
| | Theoretical calibration |
| | Insert the total cells' capacity |
| Theoretical calibration | |
| Channel selection | kg Calculate |
| Setup parameters | |
| mV/V | |
| Cells capacity | |
| Dead load | |
| Terminated | |
| | |
| | |
| Show at start up | < Back Next > Exit |

9) with an Independent channels application, enter the load cell capacity; with various load cells equalised through the external junction box, enter the total capacity (for example, if one has 4 cells of 2000 kg each one should enter "8000").

With a **Dependent channels** application, enter the sum of the capacities of the connected load cells.

By pressing on "Calculate" it's possible to sum from PC (see the previous point).

| 😵 Calibration Tool Wizard | |
|---|--|
| | Theoretical calibration |
| | Dead load value (leave empty if not necessary) |
| Theoretical calibration Channel selection Setup parameters mV/V Cells capacity Dead load Terminated | Insert value kg ○ mV ○ mV/V Capture from scale |
| Show at start up | < Back Next > Exit |

10) Acquisition of the scale zero:

- By selecting "Insert Value" it's possible to manually enter the corresponding value, in kg, in mV or in mV/V (depending on the selection highlighted in the drawing).
By selecting "Capture from scale" one receives the value from the scale:

| 🗞 Calibration Tool Wizard | |
|---|--|
| | Theoretical calibration |
| Theoretical calibration Channel selection Setup parameters mV/V Cells capacity Dead load Terminated | Dead load acquisition. Unload the platform and press the Next button. |
| Show at start up | < Back Next > Exit |

| Setup's management - 3590M301 08.00.04 U | IK | | | | | × |
|--|---|------------------------------------|--|--------|------|------|
| Name | | | | | | |
| SETUP1 | | | | | | |
| F.MODE GENERAL SETUP SCALES SERIAL R | EMOTE SCALE OUTPUTS/INF | PUTS SETPOINTS ANALOG OUTPUT | READER AND AI CODE Notes | | | |
| GENERAL KEYS SETTINGS | | ARCHIVES | | | | |
| F1 F6 (F. KEYS) | ABLE 🔄 🥝 | ENABLE | ENABLED | · 0 | | |
| 0 T SHF SWITCH (F. KEYS) | ABLE 🔄 🥝 | UNIT OF MEASURE | kg | - 0 | | |
| PRN C ENT i (F. KEYS) | ABLE 🔄 🥝 | DECIMALS | 1 | - 0 | | |
| KEYS 0.9 (F. KEYS) | ABLE 🔽 😨 | Calibration Tool v. 1.09 [Setup | | · 0 | | |
| GENERAL SETTINGS | | File Connection Send/receive Confi | juration Tools Help | 0 | | |
| REACTIVATIONS (REACT.) | ways 🔄 🤘 | Scale | | | | |
| TARE RESTORATION (RES.TAR) | SABLE 🔽 🤘 | | 1001 | 0 | | |
| START UP LCD TEXT (LOGO) | HELLO | | | 0 | | |
| TOTAL | | | | 0 | | |
| TOTALIZER FUNCTION MODE (EXE.TOT) | NUAL 🔄 👩 | ->0<· 🌒 🔷 🌒 | nV/V 0,16280 | | | |
| TOTALIZER DELAY (DLY.TOT) | | Ch UL OL OL | w1 🗰 w2 🗰 w3 🗰 | 0 | | |
| TOTALIZER TYPE (TOT.TYP) | 4D 🔄 😨 | | | 0 | | |
| TARE CONFIGURATION (TARE) | AP | Connected: 3590M301 8.00 | | | | |
| TARE AFTER TOT. (T.TOT.) | NI Tool Wiz | Server Cales | | | | |
| CONFIRMATION OF TOTAL RESET (RESET) | AF | Theoretical | calibration | | | |
| | Theoretical calibration Channel selection Setup parameters mV/V Cells capacity Dead load Terminated | - | ad acquisition under wa Please wait | y. | | |
| | Show at start up | < Ba | ck Next > | Cancel | | |
| | | | | | | |
| Send Get Export Imp | port | | | | Save | Exit |

11) The theoretical calibration of the first channel is completed:

| 😵 Calibration Tool Wizard | | × |
|--|---|---|
| | Channel selection | |
| Zero calibration | Select the next channel to calibrate and press the Next button | |
| Channel selection Scale connection Setup parameters Zero Acquisition Terminated | Channel 1 Channel 2 Channel 3 Channel 4 Terminate calibration | |
| Show at start up | < <u>B</u> ack <u>N</u> ext > <u>Exit</u> | |

12) Repeat the operation for the desired channels; at the end of the last channel, select "End calibration":

| 😵 Calibration Tool Wizard | |
|---|---|
| Calibra | ation terminated successfully |
| | To make the calibration effective it is necessary to send it to the scale. Select the operation to execute and press the Next button |
| Theoretical calibration Channel selection Setup parameters mV/V Cells capacity Dead load Terminated | Transmit setup to the scale Close Wizard Restart Wizard |
| Show at start up | < Back Next > Exit |

13) See the points from 13) to 16) of section 9.4.2.1.1 "Calibration with sample weights" "USE WITH WIZARD".

14) By closing the Wizard the complete calibration programme will appear (see section "USE WITHOUT WIZARD"):

| Calibration Tool | | |
|---|---|--|
| Eile Connection Send/ | ^l recei <u>v</u> e Configura | tjon Tools <u>H</u> elp |
| Discon Open | Save Print | Receive Send Configure Wizard About Exit |
| | | Scale Weight |
| Channel I 2 Zero Show zero tracking ->0<- Setup parameters ADD | 3 4 Zero: Disabled Cancel zero | $\begin{bmatrix} 100\% \\ 50\% \\ -$ |
| Load cells | o pro odmordatorrilli E | Setup calibration parameters |
| | 5 V | |
| Theoretical calibration | 1 | Points 1 Non pre calibrated ADC |
| Load cells Total output | 2,00015 m∀∕^ | Zero 0,000 0,30235 |
| Total capacity | 6,000 kg | Point 1 6,000 2,30310 Capture Point |
| Capture | 0,30295 | / Add Point |
| Sensitivity pts/div uV 358 1,666 Connected: 3590 | | |

As one may note in the screenshot, the first calibration point is set equal to the scale capacity.

- 15) Press on the "Exit" key in the upper right to close the programme and return to the Setup management.
- 16) By pressing now the "Save" key in the Setup management, one also stores on PC the calibration just made. Therefore, by carrying out a transmission from the setup ("Send" key) the calibration together with all the other scale parameters will be transmitted.

USE WITHOUT WIZARD

Refer to the section marked in red in the figure.

| jile Connection Sen | | Configuration | D iniTools] Tools <u>H</u> elp | | | البارية إلكار |
|---|--------------------|---------------------------|---|------------------|-------------------|---|
| Discon Open | E (Save | Print Rec | eive Send | Configure | Wizard Abou | t Exit |
| | | 1.5 | icale | | Weight | |
| Channel 1 2 Zero Show zero tracking >0<- | ng Zero:[Cance |) 4 Disabled I zero | | | mV/V 0.31 w1 = | 000 kg |
| Setup parameters A | DC pre calibra | ation Equaliza | | | | |
| Load cells Supply | 5 | v | and the second secon | ition parameters | | |
| Theoretical calibrati | ion | | Points | ŝ. | Non pre c | alibrated ADC |
| Load cells | | | | Weight (k | q) mV/V | |
| Total output | 2,00015 | mV/V | Zero | 0,000 | 0,30295 | Capture Point |
| 5420303357 (BOSS)60 | a tradedations | mV/V kg | Zero Point 1 | | | Capture Point |
| Total output | a tradedations | NETTO- 1- TO | | 0,000 | 0,30295 | Delete Point Add Point |
| Total output Total capacity Dead load Value Capture | 8000 | kg Okg OmV | | 0,000 | 0,30295 | Delete Point |
| Total output Total capacity Dead load Value Capture C Sensitivity pts/div | 8000 | kg Okg OmV | | 0,000 | 0,30295 | Delete Point Add Point Zero Calibration |

Procedure:

- 1) Select the scale to be calibrated in the "Channel" section: 1, 2, 3, 4. NOTE: if the scale is with dependent channels, always select "1".
- 2) "Supply" field: make sure that there is "5" (Volt excitation of the load cells).
- 3) "Total output" field: with Independent channels application, enter the mV/V value of the load cell; with various load cells equalised through the external junction box, enter the average of the signals. With a Dependent channels application, enter the sum of the mV/V of the connected load cells.
- 4) "Total capacity" field: with an Independent channels application, enter the load cell capacity; with various load cells equalised through the external junction box, enter the total capacity (for example, if one has 4 cells of 2000 kg each one should enter "8000").

With a **Dependent channels** application, enter the sum of the capacities of the connected load cells.

- 5) Acquisition of the scale zero:
 - The **"Value**" field allows to manually enter the corresponding value, in kg, in mV or in mV/V (depending on whether **"kg**", **"mV**", **"mV/V**" is selected).

- By pressing instead on "Capture" one receives the value from the scale:

| Calibrat | tion Tool | × |
|----------|--|---------|
| ? | This operation will acquire the de value from the scale. Do you wish to go on? | ad load |
| | <u>si</u> <u>N</u> o | |
| Calibrat | ion Tool 🛛 🔯 | |
| į) | Unload the platform | |
| | Annulla | |

6) Unload the scale and confirm the window; the following will appear:



7) Press on "Calculate"; the following will appear:



By confirming the window, a calibration point equal to the scale capacity will be entered (marked in the screenshot):

| connection pen | d/recei⊻e (| Configuration 1 | Tools Help |
|---|---------------------------------------|-------------------------------|---|
| iscon Open | E Save | Print Rec | eive Send Configure Wizard About Exit |
| | | S | icale Weight |
| | | 11 | |
| hannel 1 O 2 | O3 (| O 4 | 50% 0 0 0 kg |
| ero | 12-2 5 | | 0% − ->0<- ◆ ~ ◆ mV/V 10,30294 |
| Show zero trackin | - <u></u> | Disabled | |
| ->O<- | Cance | el zero | Ch UL OL OL W1 W2 W3 W3 |
| | | | |
| ali na mananali ang 🔥 🕅 | DC pre calibr | ation Equalizat | tion Calibration |
| etup parameters Al | o o pro calibi | | NOT VERSESSO |
| Load cells | | | |
| 100 m | 5 | v | Setup calibration parameters |
| Load cells Supply Theoretical calibrati | 5 | 1 | |
| Load cells Supply Theoretical calibrati Load cells | 5 on | V | Setup calibration parameters Points Weight (kg) mV/V |
| Load cells Supply Theoretical calibrati Load cells Total output | 5 on 2,00015 | V mV/V | Setup calibration parameters Points Meight (kg) mV/V Zero 0,000 0,30295 Capture Paint |
| Load cells Supply Theoretical calibrati Load cells | 5 on 2,00015 | V | Setup calibration parameters Points Weight (kg) mV/V |
| Load cells Supply Theoretical calibrati Load cells Total output Total capacity Dead load | 5 on 2,00015 8000 | V mV/V kg | Setup calibration parameters Points Meight (kg) mV/V Zero 0,000 0,30295 Capture Paint |
| Load cells Supply Theoretical calibrati Load cells Total output Total capacity | 5 on 2,00015 | V mV/V kg | Setup calibration parameters Points I Non pre calibrated ADC Weight (kg) mV/V Zero 0,000 0,30295 Point 1 8 0,30495 Capture Point Delete Point |
| Load cells Supply Theoretical calibrati Load cells Total output Total capacity Dead load | 5 on 2,00015 8000 | V mV/V kg | Setup calibration parameters Points 1 Non pre calibrated ADC Weight (kg) mV/V Zero 0,000 0,30295 Point 1 8 0,30495 |
| Load cells Supply Theoretical calibrati Load cells Total output Total capacity Dead load Value | 5 on 2,00015 8000 | V mV/V kg Okg OmV | Setup calibration parameters Points I Non pre calibrated ADC Weight (kg) mV/V Zero 0,000 0,30295 Point 1 8 0,30495 Capture Point Delete Point |
| Load cells Supply Theoretical calibrati Load cells Total output Total capacity Dead load Value Capture | 5 on 2,00015 8000 | V mV/V kg Okg OmV | Setup calibration parameters Points Meight (kg) mV/V Zero 0,000 0,30295 Point 1 8 0,30495 Capture Point Delete Point Add Point Zero Calibration |
| Load cells Supply Theoretical calibrati Load cells Total output Total capacity Dead load Value Capture | 5 on 2,00015 8000 0,30295 | V mV/V kg Okg OmV | Setup calibration parameters Points Mon pre calibrated ADC Weight (kg) mV/V Zero 0,000 0,30295 Point 8 0,30495 Capture Point Delete Point Add Point |
| Load cells Supply Theoretical calibrati Load cells Total output Total capacity Dead load Value Capture C Sensitivity pts/div | 5 on 2,00015 8000 0,30295 | V mV/V kg Okg OmV | Setup calibration parameters Points Meight (kg) mV/V Zero 0,000 0,30295 Point 1 8 0,30495 Capture Point Delete Point Add Point Zero Calibration |

8) To transmit only the calibration and metrological data, click on the "**Send**" key above; to transmit all the setup parameters, one should exit the calibration programme and use the "**Send**" key of the "**Setup Management**" of Dinitools (see section 9.4.1.1).

9.4.2.1.4 PRECALIBRATION OF THE INDICATOR ("ADC PRE-CALIBRATION")

The precalibration allows to **"clone" an indicator** copying the calibration onto another one (with the same firmware version) without obtaining weighing errors; this is useful, for example, if one needs to substitute the board of an indicator in an existing system, with the need to maintain the same configuration and calibration.

NOTES

- It's advisable to carry out the precalibration before installing the indicator "to be cloned" (an eventual damage of the board would not allow this operation).
- It's necessary that the indicator to be "cloned" has already been calibrated.

Procedure:

1) Connect a cell simulator to channel 1 of the indicator to be "cloned".

2) Open the calibration programme without the Wizard mode and select the "**ADC pre calibration**" section (marked in the screenshot):

| 🖼 Calibration Tool v. 1.09 [Setup from DiniTools] |
|--|
| Eile Connection Send/recei <u>v</u> e Configuration Tools <u>H</u> elp |
| Discon Open Save Print Receive Send Configure Wizard About Exit |
| Scale Weight |
| Channel 02 03 04 |
| Zero 0% ~ ~ mV/V 0,16290 Show zero tracking Zero: Disabled Ch UL 0L W1 W2 W3 |
| Setup parameters ADC pre calibration Equalization Calibration Active pre calibration New scale's pre calibration |
| mV/V ADC value mV/V ADC value |
| Point 1 0,00000 0 Duplicate Point 1 |
| Point 2 0,00000 0 scale Point 2 |
| Pre calibration Pre calibration |
| Connected: 3590M301 8.00 |

3) Press on the "Pre calibration" key on the left; the following appears:

| Calibration Tool | |
|--|------|
| This operation will alter pre calibration value Do you wish to go on? | is, |
| <u>s</u> | |
| By confirming the window, the following will app | bear |
| Calibration Tool 🛛 🔀 | |
| Insert the scale's mV/V value relative to point 1 | |
| 0,00000 | |
| OK Cancel | |

4) Enter a mV/V value for the first reference point, for example "1":

| Calibration Tool | × |
|---|---|
| Insert the scale's mV/V value relative to point 1 | |
| 1 | |
| OK Cancel | |

5) Confirm with **OK**; the following will appear:



- 6) Set the cell simulator next to the mV/V entered previously and confirm with OK.
- 7) After a few instants the successful acquisition message will appear:



8) It's now possible to enter a mV/V value for the second reference point, for example "2":



9) Confirm with **OK**; then the following will appear:

| Calibrat | ion Tool | | X |
|----------|-------------|-------------------|---------|
| (į) | Set the cal | ibrator at 2,0000 |)0 mV/V |
| | ок | Annulla |) |

- 10) Set the cell simulator next to the mV/V entered previously and confirm with OK.
- 11) After a few instants the successful acquisition message will appear:



12) By confirming with "OK", the received converter points will appear:

| Setup paramete | rs ADC pre ca | libration Equalization | Calibration | | | |
|----------------|---------------|------------------------|-------------|----------------|----------------|-----------|
| Active pre cal | libration | | | New scale's pr | e calibration | |
| | mV/V | ADC value | | | mV/V | ADC value |
| Point 1 | 1,00000 | 1184990 | Duplicate | Point 1 | | |
| Point 2 | 2,00000 | 2259615 | scale | Point 2 | | |
| | Pre calibrat | ion | | | Pre calibratio | n |

- 13) Transmit the precalibration to the indicator.
- 14) Disconnect from the PC the indicator to be "cloned" and connect the "clone".
- 15) Connect a cell simulator to channel 1 of the "clone" indicator.
- 16) Press on the "Pre calibration" key on the right; the following will appear:

| Calibrat | tion Tool | |
|----------|--|--------|
| ? | This operation will alter pre calibration v Do you wish to go on? | alues. |

- 17) Repeat the operations from point 4) to point 11).
- 18) By confirming with "OK", the received converter points will appear:

| Setup parame | eters ADC pre cali | bration Equalization | Calibration | | | |
|------------------------------------|--------------------|----------------------|-------------|-----------------|--------------|-----------|
| Active pre calibration New scale's | | | New scale's | pre calibration | | |
| | mV/V | ADC value | | | mV/V | ADC value |
| Point 1 | 1,00000 | 1184990 | Duplicate | Point 1 | 1,00000 | 1184984 |
| Point 2 | 2,00000 | 2259615 | scale | Point 2 | 2,00000 | 2259611 |
| | Pre calibrati | on | | | Pre calibrat | ion |

- 19) As one may note, the converter points of the new indicator are slightly different in respect to the indicator to be "cloned" (this is due to the nature of the ADC converters, which are always "different"); therefore if one transmits the calibration of the indicator to be "cloned" to the new indicator, it may be possible to have an error of various divisions.
- 20) Press on the "Duplicate scale" key; the following will appear:



21) By confirming the window, the converter points of the new indicator are made the same as those of the "cloned" indicator:

| Setup paramete | rs ADC pre ca | libration Equalization | Calibration | | | |
|--|---------------|------------------------|-------------|---------|--------------|-----------|
| Active pre calibration New scale's pre calibration | | | | | | |
| | mV/V | ADC value | | | mV/V | ADC value |
| Point 1 | 1,00000 | 1184984 | Duplicate | Point 1 | 1,00000 | 1184984 |
| Point 2 | 2,00000 | 2259611 | scale | Point 2 | 2,00000 | 2259611 |
| | Pre calibrat | tion | | | Pre calibrat | ion |

- 22) To transmit only the calibration and the metrological data, click on the "Send" key above; to transmit all the setup parameters, one should exit the calibration programme and use the "Send" key of the "Setup management" of Dinitools (see section 9.4.1.1).
- 23) The new indicator will in this way be the exact copy of the "cloned" indicator.

9.4.2.1.5 EQUALIZATION OF THE CHANNELS ("EQUALIZATION")

Premise: this procedure is to be followed before the calibration, if one needs to calibrate a scale with various cells (up to 4) and if one wants to equalize these directly from the indicator without using external junction boxes.

In this case one should connect each cell to one of the channels on the board.

Note: it is always better to carry out the *equalisation procedure*, but it isn't compulsory (in some applications, it can not be done).

USE WITH THE WIZARD

1) Select "Equalization" and press on "Next"; the following appears:

| 😵 Calibration Tool Wizard | | × |
|---|---|---|
| | Setup parameters | |
| Equalization | Select the operation to execute and press the Next button | |
| Scale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition Scale set Terminated | Receive setup from scale Load setup from file Check the parameters of the present setup | |
| Show at start up | < Back Next > Exit | |

 By selecting "Receive setup from scale" and pressing on "Next" it is possible to receive the metrological and calibration parameters directly from the scale. By selecting "Load setup from file" it's possible to import the data from a ".mot" file exported previously:

| Calibration Tool Wizard | |
|---|-------------------------|
| | Setup parameters |
| | Select the file to load |
| Equalization Scale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition Scale set Terminated | |
| Show at start up | < Back Next > Exit |

- Press on the "..." key to search the file in the desired directory and press on "Next" to continue.
- By selecting instead "Check the parameters of the present setup" and pressing on "Next" it's possible to check and eventually modify the parameters already stored on the PC:

| 🔞 Calibration Tool Wizard | |
|---|---|
| | Setup parameters |
| | Check the parameters and change them if necessary, then press the Next button to go on |
| Equalization Scale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition Scale set Terminated | Decimal point 3 Change Unit of measure kg Change Division 1 Change Capacity 10,000 kg Change Single range Multi range Multi division Change |
| Show at start up | < Back Next > Exit |

 By pressing on the "Change" key one modifies the relative parameter: Decimal point [Decimal point]

Unit of measure[Unit of measure]Division[Minimum division]Capacity[Capacity]Single range[Single range scale]Multi range[Multi range scale]Multi division[Multi division scale]

See point 1) of section 9.4.2.1.1 Calibration with sample weights "USE WITH WIZARD".

2) Press on "Next" to continue:

| 😵 Calibration Tool Wizard | |
|---|--|
| | Scale initialization |
| Equalization Equalization Scale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition Scale set Terminated | Scale initialization required. Press Next to proceed. |
| Show at start up | < Back Next > Exit |

3) Press on "Next" in order to execute the initialisation of the parameters for the equalisation:

| 😵 Calibration Tool Wizard | |
|---------------------------------------|---------------------------------|
| | Scale initialization |
| | |
| Equalization | |
| Scale connection | Scale initialization under way. |
| Setup parameters Scale initialization | Please wait |
| Zero Acquisition | |
| Corner acquisition | |
| Scale set | |
| Terminated | |
| Show at start up | < Back Next > Exit |

4) When the initialisation is finished one passes to the zero acquisition:

| 🔞 Calibration Tool Wizard | |
|---|--|
| | Zero Acquisition |
| Equalization Equalization Scale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition Scale set Terminated | Zero acquisition. Unload the platform and press the Next buton. |
| Show at start up | < Back Next > Exit |

5) The programme is ready to acquire the scale zero; unload the scale and press on "Next"; the following will appear:

| Setup's management - 3590M301 08.00.04 UK | | | × |
|---|--|--|-----------|
| Name | | | |
| SETUP1 | | | |
| F.MODE GENERAL SETUP SCALES SERIAL REA | IOTE SCALE OUTPUTS/INPUTS SET | TPOINTS ANALOG OUTPUT READER AND AI CODE Notes | |
| WARM UP TIME | 0 | | |
| AUTO ZERO (AUTO 0) | BLE 🕑 🧭 | | |
| INSTRUMENT TYPE (TYPE) | н 🔄 🥝 | | |
| DIRECT SALE (D.SALE) | · @ | ion Tool v. 1.09 [Setup from DiniTools]* | |
| SETUP PASSWORD DISA | OLED | nection Send/receive Configuration Tools Help | |
| PASSWORD 0 | Scale_ | | |
| AUTO SWITCH OFF (POW.OFF) DISA INDICATION OF BATTERY LEVELS (BT.STAT) DISA | | | |
| LOCKED TARE (T.LOCK) | |) 1519798 ^{ADC} | |
| NUMBER OF SCALES (NUM.SCA) | | T2T3130 | |
| | | →D<-● ~ ● mV/V -1,41542 | |
| | Ch | UL 🔶 OL 🌒 🗰 🗤 💷 🛶 🗤 🛥 | |
| | | | |
| | for the second s | nected: 3590M301 8.00 | a |
| | Calibration Tool Wizard | | |
| | | Zero Acquisition | |
| | | | |
| | Equalization Scale connection | 7 | |
| | Setup parameters | Zero acquisition under way. Please wait | |
| | Scale initialization | | |
| | Zero Acquisition Corner acquisition 1/4 | | |
| | Scale set | | |
| | Terminated | | |
| | | | |
| | Show at start up | <back next=""> Cancel</back> | |
| | | | _ |
| | | | |
| | | | |
| | | | |
| Send Get Export Impo | rt Calibration | | Save Exit |

| 😵 Calibration Tool Wizard | |
|---|--|
| | Corners capture |
| Equalization Equalization Scale connection Setup parameters Scale initialization Zero Acquisition Zero Acquisition Corner acquisition 1/4 Scale set Terminated | Capture of the corner 1. Load the corner and press Next. CH 1 CH 2 CH 3 CH 4 |
| Show at start up | < Back Next > Exit |

6) The programme is ready to acquire the weight on the first channel; position a calibration weight on the cell connected to input 1 and press on "**Next**"; the following appears:

| Setup's management - 3590M301 08.00.04 UK | | | × |
|---|---|---|-----------|
| Name | | | |
| SETUP1 | | | |
| F.MODE GENERAL SETUP SCALES SERIAL REM | TE SCALE OUTPUTS/INPUTS SETPOI | NTS ANALOG OUTPUT READER AND AI CODE Notes | |
| WARM UP TIME | 0 | | |
| AUTO ZERO (AUTO 0) | | | |
| INSTRUMENT TYPE (TYPE) | | | |
| DIRECT SALE (D.SALE) | - 0- | | |
| SETUP PASSWORD DISA | ED 👻 🧧 Calibration | Tool v. 1.09 [Setup from DiniTools]* | |
| PASSWORD | 6 | on Send/receive Configuration Tools Help | |
| AUTO SWITCH OFF (POW.OFF) | | | |
| INDICATION OF BATTERY LEVELS (BT.STAT) | ED 🤄 🖌 | 1 - 0 2 0 6 - | |
| LOCKED TARE (T.LOCK) | | 1583965 ^{ADC} | |
| NUMBER OF SCALES (NUM.SCA) | | | |
| | | | |
| | Ch Li | UL 🔴 OL 🌒 😾 🗰 😾 🗰 🗤 🖉 🗰 🖉 | |
| | Connecto | ed: 3590M301 8.00 | |
| | Calibration Tool Wizard | | |
| | | ^ | |
| | 1 | Corners capture | |
| | Equalization Seale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition 1/4 Scale set Terminated | Capture of the corner 1 under way. Please wait | |
| | Show at start up | < Back Next > Cancel | |
| | | | |
| | | | |
| | | | |
| Send Get Export Impo | Calibration | | Save Exit |

7) Repeat the operation for all the set channels by putting the same calibration weight used on the cell connected to

input 1; at the end of the last channel the equalisation is completed and it's possible to transmit **only** the equalisation data to the indicator.

| 🔞 Calibration Tool Wizard | | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| Scale set | | | | | | | | |
| Equalization Equalization Scale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition 2/2 Scale set Terminated | To make the equalization effective it is necessary to send the data to the scale. Press Next to proceed. | | | | | | | |
| Show at start up | < Back Next > Exit | | | | | | | |

8) Press "Next" to continue.

| 🚯 Calibration Tool Wizard | | | | | | | |
|---|---|--|--|--|--|--|--|
| Equaliz | Equalization terminated successfully | | | | | | |
| A | Equalization terminated. It is now possible calibrate the scale. Select the operation to execute and press the End button. | | | | | | |
| Equalization Scale connection Setup parameters Scale initialization Zero Acquisition Corner acquisition 2/2 Scale set Terminated | Close Wizard Restart Wizard | | | | | | |
| Show at start up | < Back End Exit | | | | | | |

- 9) Select whether to close the Wizard ("Close Wizard") or restart from the beginning ("Restart Wizard") and press on "End".
- 10) By closing the Wizard the complete calibration programme appears (see the "USE WITHOUT WIZARD" section):
- 11) Press on the "Exit" key in the upper right to close the programme and return to "Setup management".
- 12) By pressing now the "Save" key in the "Setup management", one stores on PC the equalisation just made. By transmitting the setup ("Send" key) the calibration will be transmitted together will the other scale parameters.

USE WITHOUT WIZARD

"NORMAL" MODE

Refer to the section marked in the screen below.



Procedure:

1) Click on "Start equalization":



Confirm the dotted box; then the following will appear:



2) Unload all the cells connected to the configured channels and confirm with OK; then the following screen will appear:

| Calibration Tool | |
|--|--|
| Equalization: zero acquisition under way. Please wait | |
| Cancel | |
| Calibration Tool | |
| Operation successful | |
| ОК | |

3) Click on OK:



4) The programme is ready to acquire the weight on the first channel; position a calibration weight on the cell connected to input 1 and press on "**Capture corner**"; the following appears:



5) Confirm the "**OK**".

| etup parameters | ADC pre calibratio | on Equaliza | ation Calibrat | tion | | | |
|-----------------|--------------------|-------------|----------------|---------|-------------|--------------|------------|
| Channel 1 | | 50000 | | | Channel 2 | | 50000 |
| ADC | 425274 | | | | ADC | 210528 | |
| Zero | 210405 | | | | Zero | 210559 | |
| Gain | 1,0000 | - | () | P | Gain | 1,0000 | 0- |
| Channel 3 | | 50000 | | • | Channel 4 | | 50000 |
| ADC | 210296 | | | | ADC | 210635 | |
| Zero | 210272 | | | | Zero | 210635 | |
| Gain | 1,0000 | 0- | | | Gain | 1,0000 | 0- |
| Loa | ad one of the | non capi | tured corr | ners an | d press 'Ca | apture corne | ؛۲' |
| | | | | | | | |
| Start eq | ualization | | | | | Capture co | orner |
| | | | | | | · | |

6) Repeat the operation for all the set channels by putting the same calibration weight on the cell connected to input 1; at the end of the last channel the equalisation is completed and the following appears:



7) To transmit only the equalisation and the metrological data, click on the "Send" key above; to transmit all the setup parameters, one should exit the calibration programme and use the "Send" key of the "Setup management" of Dinitools (see section 9.4.1.1).

<u>"EXPERT" MODE</u> Refer to the section marked in the screen below.

| | in the second | onfiguration Tools | - | | | 0 |
|-------------------------------------|---|--------------------|----------------|------------------|-------------|-------------|
| 💋 🔄 iscon Oper | | Print Receive | کی کھی Send | Configure Wiza | ard About | Exit |
| seon oper | , June | Scale | Send | | eight | 1 100000 |
| | | 100% | | * | eignt | Edit |
| hannel | | | Ξ | | | 🚺 🚺 kg |
| ① 1 ② 2 ③ 1 ③ 2 ③ 1 | 03 (| 50% | - | | | |
| ero | | 0% | ->0< | | mV/V 0,0621 | 5 ADC 66737 |
| Show zero trad | cking Zero: [Cance |)isabled | UL | ● OL ● | W1 💻 🛛 V | /2 W3 |
| ->0(- | Cance | | | | | |
| | | | | | | |
| etup parameters | ADC pre calibra | ation Equalization | Calibration | | | |
| Channel 1 | | 50000 | | Channel 2 | | 50000 |
| ADC | 21053 | 5 | | ADC | 21052 | 8 |
| Zero | 210547 | | | Zero | 210559 | |
| Gain | 1,0000 | 0- | | Gain | 1,0000 | 0- |
| Channel 3 | | 50000 | | Channel 4 | | 50000 |
| ADC | 21029 | 50000 | | ADC | 21062 | 50000 |
| | | | | | 21000 | • |
| Zero | 210272 | 0- | | Zero | 210635 | 0- |
| Gain | 1,0000 | 0- | | Gain | 1,0000 | |
| | Press | 'Start equaliza | ation' to s | start the equali | zation | |
| | | <i>\$</i> 5 | | - | | |
| | | | | | Capture d | |

Procedure:

1) Unload all the cells connected to the configured channels and click on "Start equalization":

| Setup parameters | ADC pre calibration | Equalization | Calibration | | | |
|---|---------------------|--------------|-------------|-----------|-------------|-------|
| Channel 1 | | 50000 | | Channel 2 | | 50000 |
| ADC | 210535 | | | ADC | 210528 | |
| Zero | 210547 | | | Zero | 210559 | |
| Gain | 1,0000 | 0- | () | Gain | 1,0000 | 0- |
| Channel 3 | | 50000 | \$ | Channel 4 | | 50000 |
| ADC | 210296 | | | ADC | 210635 | |
| Zero | 210272 | | | Zero | 210635 | |
| Gain | 1,0000 | 0- | | Gain | 1,0000 | 0- |
| Load one of the non captured corners and press 'Capture corner' | | | | | | |
| Start ec | qualization | | | | Capture cor | ner |

2) The programme is ready to acquire the weight on the first channel; position a calibration weight on the cell connected to input 1 and press on "**Capture corner**":

| Setup parameters | ADC pre calibration | Equalizati | on Calibratio | on | | | |
|---|---------------------|------------|---------------|----|-----------|--------|-------|
| Channel 1 | | 50000 | | | Channel 2 | | 50000 |
| ADC | 425274 | | | | ADC | 210528 | |
| Zero | 210405 | | | | Zero | 210559 | |
| Gain | 1,0000 | | - | | Gain | 1,0000 | 0- |
| Channel 3 | | 50000 | * | | Channel 4 | | 50000 |
| ADC | 210296 | | | | ADC | 210635 | |
| Zero | 210272 | | | | Zero | 210635 | |
| Gain | 1,0000 | 0- | | | Gain | 1,0000 | 0- |
| Load one of the non captured corners and press 'Capture corner' Start equalization Capture corner | | | | | | | |

- 3) Repeat the operation for all the set channels by putting the same calibration weight on the cell connected to input 1; at the end of the last channel the equalisation has been completed.
- 4) To transmit only the equalisation and the metrological data, click on the "Send" key above; to transmit all the setup parameters, one should exit the calibration programme and use the "Send" key of the "Setup management" of Dinitools (see section 9.4.1.1).

9.4.2.2 CALIBRATION WITH CALIBRATION TOOL 2

9.4.2.2.1 LANGUAGE SELECTION

1. Launch the software and the main dialog will appear:

| 🖎 DINI ARGEO | | | | |
|---|-----------------------------------|---------------------------|--|--|
| cales - Weighing systems Active Scale | Settings Equalization Calibration | | | |
| Select Scale no. | - Instrument | Import from XML | | |
| Unit of measure ADC points 👻 | Serial Number | Export to XML | | |
| Channel All 💌 | Version | | | |
| 0 ~ | User Zone 'g' | | | |
| Ø ⇒ 0 <- Ø Calibrated Scale Ø Underload/Overload | Brand of Digital Cells | Save setup on instrument | | |
| C Error | Number of Scales | × | | |
| Communication Parameters | r Scale | | | |
| Instrument Address 01 | Туре | Receive from | | |
| Serial port COM21 | I port COM21 V Number of Channels | | | |
| Connect Search | Filter | Transmit to Instrument | | |

2. Click on the Language button highlighted in the previous figure; the following window will appear:

| Language | |
|----------|----|
| English | ~ |
| Cancel | ОК |

3. Choose one of the available languages from the *drop-down* list:

| Language | × |
|---------------------|---|
| English | ~ |
| English | |
| Espanol Italiano | |

press "Cancel" to close this window without changing the language; by confirming with "OK", the selected language will

be immediately applied to all texts, "on the fly", with no need to restart the software.

9.4.2.2.2 COMMUNICATION WITH THE INSTRUMENT

9.4.2.2.2.1 ESTABLISHING A CONNECTION

- 1. Connect the instrument's serial port to the PC:
- a) In the case of direct connection to the instrument:
 - connect the serial port of 3590E03/3590E08 assigned to the Com.PC or the RS232 port of the DGX
 - turn on the instrument
 - enter in the setup environment (required only in the 3590E03/3590E08)
- b) In the case of connection to a DGX through a 3590E03/3590E08 indicator:
 - connect the serial port of the 3590E03/3590E08 assigned to the CoM.PC or CoM.Prn;
 - turn on the 3590E03/3590E08;

- enable the function to redirect the data from a serial port to the other, inside the DIAG >> SERIAL step. **NOTE:** See instrument's technical manual.

In case of various instruments connected through a RS485 network, it is necessary to set their 485 address before programming them (see respective manuals).

2. Launch the software. Then select the 485 Address assigned to the connected instrument (01 if the standard protocol has been set or DGX address not yet configured through the communication setting with the 3590E03/3590E08, see indicator's technical manual):

| Calibration Tool 2.00.00 | | |
|------------------------------|--|-----------------------------|
| DINI ARGEO | | |
| Active Scale | Settings Equalization Calibration | |
| | Model | Import from XML |
| Unit of measure ADC points 👻 | Serial Number | Export to XML |
| Channel Al | Version | |
| 0 ~ | User Zone 'g' | |
| Calibrated Scale | Brand of Digital Cells | Save setup on instrument |
| C Error | Number of Scales | |
| Communication Parameters | - Scale |)) |
| Instrument Address 01 | Туре | |
| Serial port COM21 | Number of Channels | Receive from Instrument |
| Connect Search | Filter | Transmit to Instrument |
| Exit | Click "Connect" to start communication with an | instrument |

3. Select the "Serial Port" of the PC to which the instrument is attached;

| < | Communication Parar Instrument Address COM Port | neters 01 V COM3 V | Platform Platform Type Number of Channels | Receive from Instrument |
|---|--|--------------------------|---|----------------------------|
| | Connect | Search | | Transmit to Instrument |
| | Exit Click "Connect" to start communication with an instrument | | | |

NOTE: It is possible to automatically detect all the instruments attached to the computer and select the desired one by following the **Search** procedure (see section 9.4.2.2.2.2).

5. Click the **Connect** button to start the communication and receive the instrument data:

| Communication Para | meters | Platform Type | ~ | |
|--------------------|----------|-------------------------------|-------------------|----------------------------|
| COM Port | СОМЗ 💌 | Number of Channels | * | Receive from Instrument |
| Connect | Search | | | Transmit to Instrument |
| Exit | Language | Click "Connect" to start comm | unication with an | instrument |

the following message will flash in the message panel while trying the connection:

| | Trying to establish a connection with an instrument |
|--|---|
|--|---|

And then, if the connection has been established and the reception was successful:



9.4.2.2.2 SEARCH FOR INSTRUMENTS

1. After selecting the PC serial port to which one or more instruments are connected (e.g. in case of a 485 network of instruments) click on the **Search**... button¹:

| Active Scale Select Scale no. | Settings Equalization Calibration | |
|---|-----------------------------------|----------------------------|
| | Model | Import from XML |
| Unit of measure ADC points | Serial Number | Export to XML |
| Channel All 👻 | Version | |
| 6~ | User Zone 'g' | |
| Ø ⇒ 0 <- Ø Calibrated Scale Ø Underload/Overload | Brand of Digital Cells | Save setup or instrument |
| C Eror | Number of Scales | M |
| Communication Parameters | Scale | |
| Instrument Address 01 | Туре | <u> </u> |
| Serial port COM21 💌 | Number of Channels | Receive from Instrument |
| Connect Search | | Transmit to Instrument |

2. The following window will appear, and the search will start immediately:

| 🔎 Searching i | nstrument | s | |
|---------------------|---------------|---------------|---------|
| - Detected instrume | nts | | |
| Instrument | | Serial Number | Address |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | Searching for | instruments | |
| ЕАксн | | | |
| Γ | Exit | Connect | Stop |

¹ The button is only available when no connection to an instrument is active.

3. Instruments will show up in the list as they are found:

| Searching instrument | S | | | |
|---|---------------|---------|--|--|
| Detected instruments | |] | | |
| Instrument | Serial Number | Address | | |
| 3590E | 200123456 | 01 | | |
| Searching for instruments Exit Connect Stop | | | | |

4. The search can be interrupted anytime by pressing the **Stop** button. When the search ends (upon completion or interruption) it will be possible to connect to any instrument, by selecting it from the list, then pressing the **Connect** button².

| Searching instrument | s | | |
|----------------------|---------------|--------------|--|
| Detected instruments | | | |
| Instrument | Serial Number | Address | |
| 3590E | 200123456 | 01 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Search complete | | | |
| Exit | Connect | Search again | |

5. Press Exit to close the window without connecting to any instrument or Search again to start a new search.

² As a shortcut, double-click on any instrument in the list to start connecting to it.

9.4.2.2.2.3 DISCONNECT

PREMISE:

In the case of DGX, the instrument will exit from the setup environment and restarted.

1. Check that all the modified parameters are transmitted and saved on the instrument. For any parameter that has been modified but not transmitted to the instrument yet, the caption is highlighted in red, as the **User Zone 'g'** in this example:

| Calibration Tool 2.00.00 | | | |
|---|---|--------------------|----------------------------|
| DINI ARCEO | | | |
| Active Scale Select Scale no. | Settings Equalization Calib Instrument Model | 3590E | Import from XML |
| Unit of measure ADC points V Channel All V | Serial Number Version | 200123456 | Export to XML |
| Calibrated Scale Calibrated Scale Underload/Overload Error | User Zone 'g' Brand of Digital Cells Number of Scales | 9.80656 Dgx 🖌 | Save setup on instrument |
| Communication Parameters | Scale | | N. |
| Instrument Address 01 01 01 01 01 01 01 01 01 01 01 01 01 | Type Number of Channels | Analog 😪 2 😪 | Receive from Instrument |
| Disconnect Search | | | Transmit to Instrument |
| Exit Language | Setup received from instru | ment successfully! | |

2. Just click the **Disconnect** button to stop the communication with the instrument:

| Communication Parameters | Platform | | |
|--------------------------|--------------------------|------------|----------------------------|
| Instrument Address 🛛 🛛 💽 | Platform Type | Analog 🔽 🗸 | |
| COM Port COM3 🕑 | Number of Channels | 1 💌 | Receive from Instrument |
| Disconnect Search | | | Transmit to Instrument |
| Exit Language | Data received correctly! | | |
3. If any settings have been modified, but not transmitted to the instrument yet, the following confirmation request will show up when trying to disconnect:



Choose "**No**" if you want to discard all changes and leave the settings on the instrument untouched. Press "**Yes**" if you want to transfer the changes to the instrument. "**Cancel**", of course, will simply abort the disconnection.

4. After this confirmation, if some of the settings on the instrument have changed since it was connected to the tool, a further confirmation request will show up:



Press "**Yes**" to confirm, press "**No**" to disconnect without transmit /saving the modified parameters, or press "**Cancel**" to abort the disconnection procedure. As the message itself warns, if the instrument connected is a DGX, any unsaved changes on the instrument will be irretrievably lost upon disconnection. Remember that such unsaved data could include the results of an equalization or calibration procedure. So just be sure before choosing "No".

9.4.2.2.3 ACTIVE SCALE DATA

| Active Scale Select Scale no. | 1 💌 |
|---|----------|
| 8 | 27, 4 |
| Unit of measure | Weight 💌 |
| Channel | Al |
| ● ~ ◎ -> 0 <- ● Calibrated Sc ◎ Underload/O ◎ Error | |

The **"Active Scale"** frame includes "live" weighing data for the currently selected scale. The weight panel shows a number³ representing the current weight's value of the scale, which can be displayed in one of the following units of measure:

- ADC points: raw value read from the Analogue-to-Digital Converter
- mV: voltage expressed as millivolt
- Weight: units of weight as configured in the *Calibration* tab, for example Kg:

| Settings | Equalizati | on C | Calibration |
|-----------|---------------|------|-------------|
| Settings | ı | 111 | |
| Calibrati | on 'g' | 9.8 | 30655 |
| Decima | l Digits | 1 | * |
| Unit of I | Measure | Kg | ~ |

| PARAMETER | FUNCTION | | | |
|--------------------|---|--|--|--|
| Select Scale no. | Selection of the scale, from 1 to 4 (fixed at 1 in the case of DGX) | | | |
| Unit of measure | Selection of the value's type to be shown in the weight panel, between ADC points, millivolts and weight. | | | |
| Channel | Selection of the displayed channel; select <i>All</i> to show the sum value of the configured channels, ranging from 1 to 4 in the case of analogue platform, or from 1 to 16 in the case of digital scale. | | | |
| ~ | When lit (red), this LED indicates that the weight is unstable | | | |
| →0← | When lit (green), this LED indicates that the weight detected by the weighing system is near zero, including the interval of $-1/4 + 1/4$ of the scale's division. | | | |
| Calibrated Scale | When lit (green), this LED indicates that the scale is calibrated | | | |
| Underload/Overload | When lit (red) this LED may indicate either one of the following: OVERLOAD The weight is 9 divisions or more above the Maximum Capacity. OR UNDERLOAD Approved instrument: The weight is under the gross zero (-100 divisions). Non approved instrument: The weight is under the gross zero (- capacity – 9 divisions). | | | |
| Error | When lit (red) this LED indicates an error (e.g. an overflow) on one or more channels of the scale. The value in the weight panel will freeze and turn red, while the (first) faulty channel will appear under the LED, as in this example:Active Scale Select Scale no.Unit of measure ChannelWeight < MIImage: Channel ChannelImage: Channel Channel | | | |

³ The value in the weight panel is orange until stability hasn't been reached, then it turns green

9.4.2.2.4 SETTINGS

PREMISE:

- To apply the settings also on the instrument it is required to transmit them by following the procedure described in the section 9.4.2.2.4.4.

- If the parameters have not yet been transmitted (see section 9.4.2.2.4.4) it is possible to restore the instrument's settings by following the procedure described in the 9.4.2.2.4.3 section.

| Instrument Hardware Id | DGX | Import from XML |
|---------------------------|----------|--------------------------|
| Serial Number | 81043447 | Export to XML |
| Application Version | 00.01.12 | |
| User Zone "g" | 9.8065 | 5 |
| Brand of Digital Cells | Dgx | Save setup or instrument |
| Number of Platforms | 1 | • |
| Platform | | |
| Platform Type | Analog | • |
| Number of Channels | 2 | Receive from |
| Filter | CUSTOM | Transmit to |

A table describing the meaning of these parameters can be found at the following page.

INSTRUMENT

The following parameters affect the general functioning of the instrument and all the connected scales.

| PARAMETER | DESCRIPTION |
|---------------------------|--|
| Model | Type of connected instrument: - KD3590 (3590E03/3590E08) - DGX. NOTE: The parameter is read only. |
| Serial Number | Serial number of the instrument main board. NOTE: The parameter is read only. |
| Version | Software version installed on the connected instrument: XX.YY.ZZ. NOTE: The parameter is read only. |
| User Zone "g" | Setting the gravity acceleration value of the ZONE OF USE. If a wrong g value is entered (out of the range between 9,75001 and 9,84999 inclusive), an appropriate error message will be shown. <u>If one press the Esc key</u> : the previous set value is proposed. <u>If one press the Esc key twice</u> : the value set in the instrument is restored. |
| Brand of Digital Cells | Setting the type of cells used in case of digital scale/s: - Dgx - RCD - CCI AD - RC3D - C16i |
| Number of Scales | Setting the number of connected scales - 1 scale; - 2 scales; - 3 scales; - 4 scales. |
| Filter | Selection of the type and degree of filter intervention for the stability of the weight indication: FLT 0 – 3 simple weighing H.R.0 – 1 high resolution and "A+B" mode DYN.0 – 1 weight in motion (i.e. weighing animals) CuStoM filter received from the instrument. NOTE: The parameter is visible only in case of DGX instrument. It is possible to quickly modify the parameter also during equalization and calibration procedure (see section 8 and 9). |

SCALE

The following parameters affect the active scale only (see section 9.4.2.2.3).

| PARAMETER | POSSIBLE VALUES |
|----------------------|--|
| Туре | Setting the type of used cells: - Analog - Digital |
| Number of Channel | In case of digital cells it will be possible to enter a number of cells between 1 and 16 In case of analogue cells it will be possible to enter a number of channels between 1 and 4. |

9.4.2.2.4.1 IMPORT FROM XML FILE

1. While connected to an instrument (see section 9.4.2.2.2), press the button Import from XML:

| 🖼 Dini-Argeo Calibration Tool 0 | 0.00.10 | |
|--|-----------------------------|------------------------|
| Scales - Weighing systems | | |
| Active Platform Select Platform no. | Settings Equalization Calib | ration |
| -1167 | Hardware Id | KD 3590 |
| Units ADC points 👻 | Serial Number | 80433791 Export to XML |
| Display Channel 🛛 🗐 🗸 | Application Version | 01.02.00 |

2. in the following window, browse for the folder containing the desired file:

| Apri | | | | | | ? 🔀 |
|---------------------------------|--------------------|----------------------|---|-----|------------|---------|
| Cerca jn; | 🚞 Catool | | V | 0 🦻 | • 🛄 🔁 | |
| Documenti recenti Desktop | | 0433791 01,02,00,xml | | | | |
|) Documenti | | | | | | |
| Risorse del computer | | | | | | |
| | <u>N</u> ome file: | *.xm | | | ~ (| Apri |
| Risorse di rete | <u>⊺</u> ipo file: | File xml (*.xml) | | | ~ [| Annulla |

3. Click on the file name, then press the **"Open"** button:

| Apri | | | | | ? 🔀 |
|---------------------------------|--------------------|--------------------------------|----|-------|---------|
| Cerca jn; | Catool | ~ | 00 | • 🖽 🖻 | |
| Documenti recenti Desktop | 3590E03 S | N80433791 01.02.00.xml | | | |
| Documenti | | | | | |
| Risorse del computer | Nome file: | 3590E03 SN80433791 01.02.00.xm | .l | * | |
| Risorse di rete | <u>T</u> ipo file: | File xml (*.xml) | | ~ | Annulla |

4. The setup parameters contained in the file will be loaded into the Calibration Tool, provided they are valid, while the message panel will show the operation's result:

| Exit Setup successfully imported from file: Language C:\Programmi\Catool\3590E03 SN 80433791 01.02.00.xml |
|--|
|--|

9.4.2.2.4.2 EXPORT TO XML FILE

1. While connected to an instrument (see section 9.4.2.2.2), and after the necessary parameter changes and/or equalization/calibration procedures (see sections 9.4.2.2.5 and 9.4.2.2.6), press the "**Export to XML**" button, from the **Settings** tab:

| 🕙 Dini-Argeo C | alibration Tool (| 00.00.10 | | |
|----------------------------------|-------------------|--------------------------|-----------|---------------|
| \odot | ARGEO | | | |
| Scales - Weig Active Platform | hing systems | Settings Equalization Ca | libration | |
| Select Platform no | x 1 ~ | Instrument | | Import from |
| | 1167 | Hardware Id | KD 3590 | XML |
| Units | ADC points 🖌 | Serial Number | 80433791 | Export to XML |
| Display Channel | All | Application Version | 01.02.00 | |
| | | Harr Zono Pat | 9 90655 | |

2. A well-known Save As window will show up. Browse for the folder where the new file is to be saved:

| Salva con nom | e | | ? 🔀 |
|---------------------------------|--------------------|------------------|---------|
| Salva jn: | 🚞 Catool | S 🗘 📂 🖽 - | |
| Documenti recenti Desktop | | | |
| Documenti | | | |
| Risorse del computer | | | |
| | <u>N</u> ome file: | 1xml 💌 🚺 | Salva |
| Risorse di rete | Sal⊻a come: | File xml (*.xml) | Annulla |

4. Type in the name of the file and press the **"Save"** button; one will find a new XML file in the selected path, containing the configured parameters.

| Salva con nom | e | | | | ? 🔀 |
|-------------------------|--------------------|--------------------------------|-----|-------|---------------|
| Salva jn: | 🚞 Catool | | 0 2 | • 🗉 🕈 | |
| Documenti recenti | | | | | |
| Desktop | | | | | |
| Documenti | | | | | |
| Risorse del computer | y | | | | |
| | <u>N</u> ome file: | 3590E03 SN80433791 01.02.00 xm | Ì | | <u>S</u> alva |
| Risorse di rete | Sal⊻a come: | File xml (*.xml) | | ~ | Annulla |

9.4.2.2.4.3 RECEIVE FROM INSTRUMENT

1. Connect the instrument (see section 9.4.2.2.2); if some parameters had been changed or imported from XML but not yet transmitted to the instrument, it will be possible to restore the program's data with the instrument's current values:

| | - Instrument Hardware Id | KD 3590 | Import from XML |
|--|-----------------------------|----------|-----------------------------|
| | Serial Number | 80433791 | Export to XML |
| Units ADC points Display Channel All | Application Version | 01.02.00 | |
| 6 ~ | User Zone "g" | 9.80655 | |
| Calibrated Scales O <- Calibrated Scales O verload | Brand of Digital Cells | Dgx 💌 | Save setup on instrument |
| Error | Number of Platforms | 1 | |
| Communication Parameters | Platform | | |
| Instrument Address 01 | Platform Type | Analog 🔽 | |
| COM Port COM3 🗸 | Number of Channels | 2 | Receive from Instrument |
| Disconnect Search | | | Transmit to Instrument |

2. Press the "Receive from instrument" button; the following messages will appear sequentially in the message panel:

|--|



9.4.2.2.4.4 TRANSMIT TO INSTRUMENT

PREMISE:

- To permanently save the transmitted settings on the scale:

1) follow the procedure described in the section 9.4.2.2.4.5,

or

2) save the setup by exiting from the setup environment of the instrument (possible with the 3590E03/3590E08 only, see instrument's manual).

- If the transmitted parameters have not yet been permanently saved on the instrument (see section 9.4.2.2.4.5) it is possible to restore the previous settings:

1) disconnect the instrument without saving the setup (see section 9.4.2.2.2.3) and

2) exit from the setup environment of the instrument without saving (required with the 3590E03/3590E08 only, see instrument's manual).

PROCEDURE

1. Connect the instrument (see section 9.4.2.2.2) and, once all the parameters are modified, select the "**Settings**" window, then press the "**Transmit to Instrument**" button:

| Active Platform Select Platform no. | | Settings Equalization Cal | ibration |
|--|--------------|------------------------------|------------------------------|
| Select Flatroim no. | 1 💌 | Instrument | Import from |
| | 167 | Hardware Id | KD3590 |
| Units | ADC points 🔽 | Serial Number | 80433791 Export to XML |
| Display Channel | All 🔽 | Application Version | 01.02.00 |
| (● ~ (○ -> 0 <- | | User Zone "g" | 9.80655 |
| Calibrated Sc | ales | Brand of Digital Cells | Dgx Save setup on instrument |
| Error | | Number of Platforms | 1 💌 |
| | | Platform | |
| Communication Par | rameters | | |
| Instrument Address | 01 💌 | Platform Type | Analog Receive from |
| COM Port | СОМЗ 💽 | Number of Channels | 1 viceive nom |
| Disconnect | Search | | Transmit to Instrument |

2. if the data are correct the following will appear sequentially in the message panel:

| | Exit | Language | Transmitting setup data to instrument. Please wait |
|--|------|----------|--|
|--|------|----------|--|

| Exit Language | Data transmitted correctly! |
|---------------|-----------------------------|
|---------------|-----------------------------|

9.4.2.2.4.5 SAVE SETUP ON INSTRUMENT

1. Connect the instrument (see section 9.4.2.2.2) and, once all the parameters are modified and transmitted (see section 9.4.2.2.4.4), select the "**Settings**" window:

| Active Platform Select Platform no. | 1 - | | ibration | - |
|--|--------------|--------------------------|----------|----------------------------|
| | | Hardware Id | KD 3590 | Import from XML |
| Units | ADC points 👻 | Serial Number | 80433791 | Export to XML |
| Display Channel | All 🔽 | Application Version | 01.02.00 | |
| 6 ~ | | User Zone "g" | 9.80655 | _ |
| Solution (Contraction) (Co | ales | Brand of Digital Cells | Dgx 💌 | Save setup on instrument |
| Error | | Number of Platforms | 1 | |
| Communication Par | ameters | Platform | | |
| Instrument Address | | Platform Type | Analog 🛃 | |
| COM Port | сомз 👻 | Number of Channels | 1 💌 | Receive from Instrument |
| Disconnect | Search | | | Transmit to Instrument |
| Exit | Language | Data received correctly! | | |

2. Press the **"Save setup on instrument**" button. The message panel will notify whether the operation has been successful:

| Active Platform Select Platform n | o. 1 💌 | Settings Equalization Cal | libration | Import from |
|---|--------------|---------------------------|-------------------|-----------------------------|
| | I NA | Hardware Id | KD 3590 | XML |
| Units | ADC points 🗸 | Serial Number | 80433791 | Export to XML |
| Display Channel | All | Application Version | 01.02.00 | |
| | | User Zone "g" | 9,80655 | |
| O <- Calibrated 9 Overload | icales | Brand of Digital Cells | Dgx 💌 | Save setup on instrument |
| C Error | | Number of Platforms | 1 💌 | |
| Communication P | arameters | Platform | | |
| Instrument Addre | ss 01 🔛 | Platform Type | Analog 😽 | |
| COM Port | СОМЗ 💽 | Number of Channels | 1 💌 | Receive from Instrument |
| Disconnect | Search | | | Transmit to Instrument |
| Exit | Language | Setup saved on instrume | ent successfully! | |

9.4.2.2.5 EQUALIZATION

PREMISE:

- This procedure may be carried out only for scales having more than one channel (either digital or analogue cells).

- For this procedure it is advisable to use a weight of at least 1 / (n - 1) of the capacity (where n is the number of the digital cells or channels).

- The equalization is automatically applied to the instrument once the procedure is finished, therefore it is not required to transmit it.

- If the equalization is not finished yet (see section 9.4.2.2.4.4) it is possible to abort the procedure as explained at section 9.4.2.2.5.1.

- To permanently save the transmitted equalization on the scale:

1) follow the procedure described at section 9.4.2.2.4.5.

or

2) save the setup by exiting from the setup environment of the instrument (possible only with the 3590E03/3590E08, see instrument's manual).

- If the transmitted parameters have not yet been saved permanently on the instrument (see section 9.4.2.2.4.5) it is possible to restore the previous equalization:

1) disconnect the instrument without saving the setup (see section 9.4.2.2.2.3)

and

2) exit from the setup environment of the instrument without saving (required only with the 3590E03/3590E08, see instrument's manual).

PROCEDURE

1. Connect the instrument (see section 9.4.2.2.2) and, once all the parameters are modified and transmitted, select the **"Equalization**" window:



2. The current equalization coefficient for each channel is displayed at the centre of the dialog. Click on the **"Start equalization"** button:

| 2.00.00 | |
|---|--|
| \sub DINI ARGEO | |
| Active Scale | Settings Equalization Calibration |
| Unit of measure ADC points Channel AII | Filter |
| Communication Parameters Instrument Address Serial port Disconnect Search | Start Equalization |
| Exit Language | Setup received from instrument successfully! |

In case of some parameter changes not transmitted to the instrument, the following notice will show up:



By choosing "**No**", no data will be transmitted, but it will not be possible to proceed with the equalization. Pressing "**Yes**" will send the changes to the instrument, then the equalization procedure will start automatically. **3.** Once the procedure is started, the ADC points for each channel will be shown and updated live at the centre of the dialog, in place of the equalization coefficients.

The weight stability is highlighted through the colour of both the weight panel and the "**Capture**" button: *orange* when unstable, or *green* when stable, as in the following example:

| Calibration Tool 2.00.00 | E 🖬 🔀 |
|--|-----------------------------------|
| DINI ARGEO Scales - Weighing systems | |
| Active Scale Select Scale no. | Settings Equalization Calibration |
| Unit of measure ADC points | Filter HR 1 |
| Channel Al Channel Channel Al Channel Channel Ch | Channel ADC points |
| Communication Parameters Instrument Address 01 Serial port COM21 | |
| Disconnect Search | Abort Capture Zero |

if required, it is possible to modify the type and degree of filter intervention so as to affect the stability of the weight indication, by the following:

- In the case of DGX instrument, by choosing a different filter parameter from the "Filter" list

- In the case of 3590E03/3590E08 instrument (for which the Filter list is not shown), through the "Stabil" parameter in the setup environment of the indicator (see instrument's technical manual).

Notice that while the equalization procedure is in progress, it is not possible to navigate to different tabs of the dialog (i.e. "**Settings**" or "**Calibration**"). Any such attempts will prompt the following warning to temporarily appear in the message panel:

| Exit | Language | Navigation locked while calibration/equalization in progress |
|------|----------|--|
| | | |

4. Unload all the cells of the scale, then press the "Capture Zero" button:

| 🛯 Dini-Argeo Calibration Tool (| 00.00.10 | |
|---|--|-----------------|
| Scales - Weighing systems | | |
| Active Platform Select Platform no. | Settings Equalization Calibration | Ì |
| Units ADC points Display Channel All Calibrated Scales Overload Error | Channel ADC points 1 -146515 2 -191360 | Filter |
| Communication Parameters Instrument Address 01 COM Port COM3 Disconnect Search | Abort Equalization | Capture Zero |
| Exit Language | | |

The picture above shows an example of unstable weight. As highlighted by the orange color, it is not advisable to "capture" in such a condition. However, it is still possible, by answering "**Yes**" to the following confirmation request:

| Unstable Weig | ght | | × |
|---------------|---------------------------|--------------|-----|
| Confirm captu | ring <mark>w</mark> ith u | nstable weig | ht? |
| C | 6 | | |
| L | 21 | | lo |

The capture will occur at the exact instant that the "**Yes**" button is pressed, whether stability has been reached in the meantime or not. Use caution though when acquiring unstable weights, as such operation could lead to incorrect equalization coefficients being calculated and applied by the instrument.

5. Once the zero value has been acquired, the first channel can be measured. Load the desired sample weight on the cell connected to channel 1, as prompted by the message panel:



6. The loaded channel will be automatically detected and indicated by a shaking arrow, while it will also be automatically selected in the **"Channel"** box, so as to display the ADC points for the current channel in the weight panel too⁴:

| 2.00.00 | | |
|--|--|--------------------|
| Scales - Weighing systems | | |
| Active Scale Select Scale no. | Settings Equalization Calibration | |
| Unit of measure ADC points Channel | | Filter |
| ~ ~ O <- Calibrated Scale Underload/Overload Error | Channel ADC points | |
| Communication Parameters | | |
| Serial port COM21 V Disconnect Search | Abort Equalization | Capture Channel |
| Exit | Load desired channel with the sample we equalization point | reight to capture |

As soon as the weight on the current channel reaches stability (signalled by the green colour), press the "**Capture Channel**" button. A green tick will show up next to the channel just acquired. From now on, the orange colour will be used not only for instability, but also for channels already captured:

| Tool 2.0 | 00.00 | |
|----------------------------------|-------------------------------|--------|
| Scales - Weighing s | GEO _{ystems} | |
| Active Scale Select Scale no. | Settings Equalization Calibra | Filter |
| Channel 1 | Channel ADC point | |

⁴ It is still possible, however, to select "All", or even another channel, if needed.

6. Move the sample load on the next cell, then repeat the operation. Once all channels have been measured, the newly calculated equalization "**Coefficients**" will show up again in place of the "Adc points", while a message will report a successful procedure:

| 2.00.00 | | |
|--|-----------------------------------|-----------------------|
| DINI ARGEO Scales - Weighing systems | | |
| Active Scale Select Scale no. 1 | Settings Equalization Calibration | ~ |
| Unit of measure Channel Chan | Channel Coefficient | Filter |
| Communication Parameters Instrument Address Serial port COM21 Disconnect Search | | Start Equalization |
| Exit Language | Equalization completed correctly. | |

9.4.2.2.5.1 EQUALIZATION ABORT

1. While the equalization procedure is in progress, it is possible to abort it, thus restoring the previous coefficients on the instrument. Press the **"Abort Equalization"** button at the bottom of the equalization frame:

| Instrument Address | 01 | | |
|--------------------|--------|------------------------------------|-----------------------|
| COM Port | сомз 💌 | | |
| Disconnect | Search | Abort Equalization | Capture Channel |
| Exit | | Load desired channel with the same | ple weight to capture |

2. Then respond to the confirmation request:



3. Press "**Yes**" to discard all data acquired thus far and abort the procedure; press "**No**" to avoid aborting and continue equalizing the scale.

9.4.2.2.6 CALIBRATION

The program offers various possibilities:

- Calibration with Sample Weights
- Zero Calibration
- Calibration parameters modification

9.4.2.2.6.1 CALIBRATION WITH SAMPLE WEIGHTS

PREMISE:

- In case of various connected scales, each of them must be calibrated on its own, with its own capacity, division and unit of measure.

- In case of various channels (no matter whether connected to digital or analogue cells), in addition to the calibration, one must carry out the equalisation (see 9.4.2.2.5 section).

- The calibration is automatically applied to the instrument once the procedure is finished, therefore it is not required to transmit it.

- As long as the calibration is in progress (see section 9.4.2.2.4.4) it is possible to abort the procedure by following the procedure described in the 9.4.2.2.6.1.1 section.

- To permanently save the transmitted calibration on the scale:

1) follow the procedure described in the section 9.4.2.2.4.5

or

2) save the setup by exiting from the setup environment of the instrument (possible only with the 3590E03/3590E08, see instrument's manual).

- If the transmitted parameters have not yet been saved permanently on the instrument (see section 9.4.2.2.4.5) it is possible to restore the previous calibration:

1) disconnect the instrument without save the setup (see section 9.4.2.2.2.3)

and

2) exit from the setup environment of the instrument without save (required only with the 3590E03/3590E08, see instrument's manual).

1. Connect the instrument (see section 9.4.2.2.2) and, once all the parameters are modified and transmitted, select the **"Calibration**" window:

| | 1 | 1.53 | Settings | | | | - Calibration | | | |
|---|--------------|------|-----------------------------|-----|------|-------|---------------|------------|--|--|
| | | Ca | alibration 'g' | 9.8 | 0655 | Num | iber of point | filter | | |
| anna an tao a | | De | ecim <mark>al</mark> Digits | 1 | * | | 2 🐱 | HR1 | | |
| | ADC points 💌 | Ur | nit of Measure | Kg | ~ | Sa | mple Load | ADC points | | |
| Channel | All | Ca | pacity | | _ | 0 | 0.0 | 1 | | |
| 6~ | | | | | 1 | 500,0 | 3441126 | | | |
| O <- Calibrated Scale | le. | | Single Range 🛛 👻 | | ~ | 2 | 1000,0 | 6664546 | | |
| Underload/Ove | 820 | Nu | mber | 1 | Ŷ | | | | | |
| Error | | | Capacity | Div | Ι, | | | | | |
| | | 1 | 1000,0 | 1 | * | | | | | |
| Communication Para | 01 | 2 | 0,0 | 1 | 4 | | | | | |
| Instrument Address | | 3 | 0.0 | _ | 4 | | | | | |
| Serial port | COM21 V | ~ | 107.604 | 10 | 1000 | | | | | |

The window shows the current calibration parameters for the selected scale, as received from the instrument.

2. Make changes to any parameters, if needed, before calibrating the scale. As usual, the caption for the modified parameters will turn red, as in the following example:

| Scales - Weighing syst - Active Scale | | | _ | | | | |
|--|-----------------------|---------------|------------------|----------------------|--|--|--|
| Select Scale no. 1 | Settings Equalizati | on Calibratio | and the second | | | | |
| | Settings | 9.80651 | Calibration | | | | |
| | Calibration 'g' | | Number of points | 1 | | | |
| Unit of measure ADC points | Decimal Digits | 2 💌 | 6 💌 | HR1 💌 | | | |
| Prese pointe | Unit of Measure | g 👻 | Sample Load | ADC points | | | |
| Channel All | Capacity | | 0 0.00 | 1 | | | |
| @ ~ | | | 1 500,00 | 3441126 | | | |
| G -> 0 <- Calibrated Scale | Multi-Range | * | 2 1000,00 | 6664546 | | | |
| Underload/Overload | Number | 3 🗸 | 3 1500,00 | 0 | | | |
| C Error | Country | Div. | 4 2000,00 | 0 | | | |
| | Capacity 1 1000,00 | 1 | 5 2500,00 | 0 | | | |
| Communication Parameters - | | | 6 3000,00 | 0 | | | |
| Instrument Address 01 | 2 2000,00 | 2 🗸 | | | | | |
| Serial port COM21 | 3 3000,00 | 5 💌 | | | | | |
| Disconnect Search | Calibrate Zero | | | Start Calibration | | | |
| Exit Langua | | m instrumer | nt successful)y! | | | | |

3. These changes must be transmitted to the instrument *before* calibrating it. It is possible to do this through the button **"Transmit to Instrument"**, after focusing the tab **"Settings"**. But that would be unnecessary, since it will be done automatically at the pressure of the **"Start Calibration"** button. First, though, the following warning will be given:



4. This warns that the calibration about to start will be based on a gravity value (calibration "g" constant) different from the value which will be used by the instrument when operating normally (user "g" constant). Clicking on **Yes** to proceed will prompt a further notice:

| CalibrationTool | X |
|--|---|
| Changes must be sent to instrument. Proceed? | |
| <u>Si</u> <u>N</u> o | |

By choosing **No**, no data will be transmitted, but it will not be possible to proceed with the calibration. Pressing **Yes** will send the changes to the instrument, then the calibration procedure will start automatically (notice the **"Calibrated Scale"** LED turning off):

| - Active Scale Select Scale no. | | Settings Equaliza | tion Calibratio | n | |
|------------------------------------|--------------|----------------------|---|-----------------|------------|
| Select Scale No. | | Settings | | -Calibration | |
| | - P1 | Calibration 'g' | 9.80651 | Number of point | t: Filter |
| 27. | | Decimal Digits | 2 🖌 | 6 🛩 | HR 1 💌 |
| Unit of measure | ADC points 👻 | Unit of Measure | g 🖌 | Sample Load | ADC points |
| Channel | Al 🕑 | Capacity | | 0 0,00 | |
| <i>•</i> ~ | | Capacity | | 1 500,00 | |
| Calibrated S | | Multi-Range | * | 2 1000,00 | [|
| Underload/Overload | | Number | 3 🗸 | 3 1500,00 | F |
| 🖉 Елгог | | Constant | | 4 2000,00 | 1 |
| | | Capacity 1 1000,0 | the second se | 5 2500,00 | F |
| Communication Pa | arameters | | | 6 3000,00 | |
| Instrument Addres | s 01 🔗 | 2 2000,0 | | | |
| Serial port | COM21 👻 | 3 3000,0 | 10 5 💌 | | |
| | | Abort | | Cancel last | Capture |
| Disconnect | Search | Calibration | | point | Zero |
| | | Unload the scale | to capture z | em | |
| Exit | Language | | a suprato L | | |

5. The *shaking* arrow will point to the first calibration point to be captured, which is always the zero. Make sure no weight is loaded on the scale, then press **Capture Zero**. The ADC points will freeze, while a green tick will show up next to the calibration point just acquired. Then the arrow will move down to the next calibration point and turn red, while the button and weight panel turn orange, signifying - besides instability - the need to load the next sample weight on the scale

| Active Scale Select Scale no. | 1 💌 | Settings Equalization Calibration Calibration |
|----------------------------------|--------------|--|
| | | Calibration 'g' 9.80651 Number of point: Filter |
| | | Decimal Digits 2 V 6 HR 1 V |
| Unit of measure | ADC points 💟 | Unit of Measure g Sample Load ADC points |
| Channel | All | |
| 6~ | | |
| O <- Calibrated Sc | -1- | Multi-Range 2 1000,00 |
| Underload/O | 17170 | Number 3 3 1500,00 |
| Error | | 4 2000,00 |
| | | Capacity Div. 1 1000,00 1 9 2500,00 |
| Communication Pa | rameters | 6 3000,00 |
| Instrument Address | 01 👻 | |
| Serial port | COM21 | 3 3000,00 5 💌 |
| Disconnect | Search | Abort Calibration Cancel last point Point |
| Exit | Language | Load the required sample weight on the scale to capture calibration point. |

6. Load the required sample weight on the scale, wait for stability (which can be affected by changing the filter, if available)⁵, then press the button "**Capture Point**":

| Active Scale Select Scale no. | 1 | Settin | gs Equalizatio | n C | alibratio | _ | pration | | |
|-----------------------------------|--------------|-------------|----------------|-----|-----------|---------------|-------------|--------|------------------|
| 111 | | bration 'g' | 9.8 | | Nur | mber of point | - | Filter | |
| Unit of measure | ADC points 🗸 | 1 2000 | imal Digits | 2 | * | | 6 💌 | HR | ~ |
| Channel | Al 🔍 | Unit | of Measure | g | ~ | 1.4 | ample Load | 1 | ADC points |
| 6~ | | | Capacity | | | 0 | 0.00 | 4 | 1117421 |
| Calibrated Scale | | I | Multi-Range 🖌 | | | 2 | 1000,00 | | <u> </u> |
| Underload/Overload | | Num | Number 3 🔽 | | 3 | 1500,00 | | [| |
| Error | | | Capacity | Div | - Me | 4 | 2000,00 | | 1 |
| | | 11 | 1000,00 | 1 | ~ | 5 | 2500,00 | | |
| Communication Para | | 2 | 2000,00 | 2 | ~ | 6 | 3000,00 | | |
| Instrument Address Serial port | 01 V | 3 | 3000,00 | 5 | * | | | | |
| Disconnect | Search | 20070 | Abort | | | [| Cancel last | 7 | Capture Point |

⁵ See point 3 of section 9.4.2.2.5 about equalization on how stability can be affected through filters and other means.

7. It is possible to change the sample weight values for the calibration points not yet acquired. It is also possible to go back and capture the previous point again, by pressing the "Cancel last point" button (the arrow will move up, back to the preceding point):

| Select Scale no. | | | ttings libration 'g' | 9:80 | 0651 | | oration nber of point | : | Filter |
|--|------------|-------|---|------|------|---------|--------------------------|----|-------------------|
| Unit of measure | ADC points | 1.000 | Decimal Digits 2 🛩 Unit of Measure g 👻 | | | 9 | 6 💌 | HR | 1 v ADC points |
| Channel All | | | Capacity | | | 0 | 0.00 | 1 | 5 1117421 |
| Solution -> 0 <- Calibrated Scale | | | Multi-Range | | 2 | 1000,00 | | | |
| Underload/Overload | | Nu | Number 3 💌 | | 3 | 1500,00 | | 1 | |
| Error | | | Capacity | Div | | 4 | 2000,00 | | 1 |
| | | 1 | 1000.00 | 1 | ~ | 5 | 2500,00 | | 1 |
| Communication Para Instrument Address | ameters | 2 | 2000,00 | 2 | ~ | 6 | 3000,00 | | |
| Serial port | COM21 👻 | 3 | 3000,00 | 5 | ~ | | | | |
| Disconnect | Search | | Abort | | (| - | Cancel last | M | Capture Point |

8. Repeat last step for all other calibration points, until the last point has been captured. A message will confirm that the calibration has completed successfully, while the "Calibrated Scale" LED will turn on (green):

| Active Scale | Sett | ings Equalizatio | n Ca | libratio | n | | | |
|------------------------------|------|---------------------|------|----------|---------|-------------|------|-------------|
| Select Scale no. 1 | Se | ettings | | | -Calibr | ation | | |
| BCC451 | Ca | alibration 'g' | 9.80 | 651 | Num | ber of poin | te | Filter |
| and and and and a such about | D | ecimal Digits | 2 | ~ | l d | 6 🛩 | HR 1 | V |
| Unit of measure ADC points | 💌 U | nit of Measure | g | * | Sa | nple Load | | ADC points |
| Channel All | | pacity | - | | 0 | 0,00 | 1 | 5 |
| <i>•</i> ~ | | pacity | | | 1 | 500,00 | 1 | 1117416 |
| Calibrated Scale | | Multi-Range 🗸 | | | 2 | 1000,00 | 1 | 2190409 |
| Underload/Overload | | mber | 3 | ~ | 3 | 1500,00 | 1 | 3296732 |
| Error | | Course | Div | | 4 | 2000,00 | 1 | 4451922 |
| | 1 | Capacity 1000.00 | 1 | ~ | 5 | 2500,00 | 1 | 5558233 |
| Communication Parameters | | | - | | 6 | 3000,00 | 1 | 6664549 |
| Instrument Address 01 | ~ 2 | 2000,00 | 2 | ~ | | | | |
| Serial port COM21 | 3 | 3000,00 | 5 | ~ | | | | |
| | |) | | | | | 6 | Start |
| Disconnect Search | Ca | librate Zero | | | | | | Calibration |

9. Now that the scale is calibrated, it is possible to select "Weight" as "Unit of Measure" for the weight panel:

| Scales - Weighing syste | | |
|---|---|--|
| Active Scale Select Scale no. | Settings Equalization Calibration Settings Calibration 'g' 9.80651 Decimal Digits 2 | Calibration Number of points Filter |
| Unit of measure Weight Channel All Channel -> 0 <- Calibrated Scale Underload/Overload Error | Unit of Measure g Capacity Multi-Range Number 3 | Sample Load ADC points 0 0,00 ✓ 1 500,00 ✓ 1117416 2 1000,00 ✓ 2190409 3 1500,00 ✓ 3296732 4 2000,00 ✓ 4451922 |
| Communication Parameters Instrument Address 01 Serial port COM21 | Capacity Div. 1 1000,00 1 2 2000,00 2 3 3000,00 5 | 5 2500,00 ✓ 55558233 6 3000,00 ✓ 6664549 |
| Disconnect Search | Calibrate Zero | Start Calibration |

If the scale is not calibrated (e.g. during calibration itself) only "ADC points" and "mV" (*millivolt*) are allowed as "Unit of measure". Any attempt to select "Weight" will make a warning flash temporarily in the message panel:

| Exit | Language | Weight unit available only after calibrating the scale! |
|------|--|---|
| | 100 March 100 Ma | N |

Notice also that while the calibration procedure is in progress, as for equalization, it is not possible to navigate to different tabs of the dialog (i.e. "**Settings**" or "**Equalization**"). Any such attempts will prompt the following warning to temporarily appear in the message panel:

| Exit | Language | Navigation locked while calibration/equalization in progress |
|------|----------|--|
| | | |

9.4.2.2.6.1.1 CALIBRATION ABORT

1. While the Calibration procedure is in progress, it is possible to abort it and have the previous coefficients restored on the instrument. Press the **"Abort Calibration"** button at the bottom of the calibration frame:

| Instrument Address Serial port | 01 V COM21 V | 2 2000,00 2 V 3 3000,00 5 V |
|-----------------------------------|-----------------|--|
| Disconnect | Search | Abort Calibration Cancel last point Point Point |
| Exit | Language | Load the required sample weight on the scale to capture calibration point. |

2. Then respond to the confirmation request:

| CalibrationTool | |
|--------------------|--|
| Abort calibration? | |
| Si <u>N</u> o | |

3. Press "**Yes**" to discard all data acquired thus far and abort the procedure; press "**No**" to avoid aborting and continue calibrating the scale.

9.4.2.2.6.2 ZERO CALIBRATION

The zero calibration allows to carry out a new zero point without completely recalibrating the scale (the other points are proportionally altered); it's therefore necessary that the scale be already calibrated. Press the **"Calibrate Zero"** button when the scale is unloaded and the new zero will be acquired immediately⁶. Then notice how the weight and the calibration data change. This is before calibrating the zero:

| | | - Settin Calibr | igs ation 'g' | 9.8 | 0655 | Calibration Number of points Filter |
|-----------------------------------|--------|--------------------|------------------|------------------------|------|-------------------------------------|
| | | 1 255502 | nal Digits | 1 | ~ | 3 MR1 |
| Unit of measure Weight | | Unit | of Measure | Sample Load ADC points | | |
| Channel All | | Сара | city | | | 0 0,0 -3 1 1000,0 2221518 |
| 6 -> 0 <- Calibrated Scale | | Sir | Single Range 🖌 | | | 2 2000,0 🗸 4443029 |
| Underload/Overload | | Numb | Number 1 | | | 3 3000.0 🗸 6664542 |
| | | | Capacity | Div | 1. | |
| | | 1 | 3000,0 | 1 | * | |
| Communication Pa | | 2 | 0,0 | | ~ | |
| Instrument Address Serial port | COM21 | 3 | 0.0 | | 2 | |
| Disconnect | Search | Calibr | ate Zero | | | Start |

And the following is after pressing the button. As the new "ADC points" values show, the calibration data have been linearly displaced, so as to set the current weight as the new zero value:

| | Ø, | | Settings Calibration 'g' Decimal Digits | 9.8 | 0655 | Calibration Number of points Filter |
|--------------------------------------|-----------|--------------------------|---|----------|--|--|
| Unit of measure | Weight | ~ | Unit of Measure | Kg | * | Sample Load ADC points |
| Channel AI ✓ | | Capacity Single Range | 2 | ~ | 0 0,0 -12842 1 1000,0 2208679 2 2000,0 4430190 | |
| Calibrated S Underload/C Error | 20120 | | Number | 1 Div | | 3 3000,0 6651703 |
| Communication Pa | arameters | _ | 1 3000 | | ~ | |
| Instrument Addres | s 01 | ~ | 2 0 | | 1 | |
| Serial port | COM21 | | 3 0 | 0 | 4 | |

⁶ Only in case of instability will the user be required to confirm whether to proceed with the acquisition or not.

9.4.2.2.6.3 CALIBRATION PARAMETERS MODIFICATION

It is possible to manually adjust the calibration data, in order to correct slight nonlinearities in the scale's response. This is achieved indirectly, by modifying the *sample weight* rather than the *ADC points*, for a given calibration point. In the following example the **"Sample Load n. 1"** is modified from 1000.0 to 1001.0, so as to correct a -1 Kg error at that calibration point, which is visible in the weight panel:

| Select Scale no. | 99. Ø | - Settings Calibration 'g' | 9.8 | 0655 | Calibr Numl | ation per of points | Filter |
|--------------------|----------|-------------------------------|------------------|------|----------------|------------------------|----------------------|
| | | Decimal Digits | 1 | * | | 3 🔽 🕴 | R1 |
| Unit of measure | Weight 💟 | Unit of Measure | Kg | ~ | Sar | nple Load | ADC points |
| Channel All | | Capacity | | | | 0,0 | -12842 |
| @~ | | Capacity | | | 1 | 1001,0 | 2208679 |
| Calibrated Scale | | Single Rang | Single Range 🛛 👻 | | | 2000,0 | 4430190 |
| Underload/Overload | | Number | Number 1 | | 3 | 3000,0 | 6651703 |
| 6 Error | | Capacit | y Div | i. | | | |
| | | 1 300 | 0,0 1 | * | | | |
| Communication Par | | 2 | 0,0 | × | | | |
| Instrument Address | | 3 | 0.0 | 12 | | | |
| Serial port | COM21 | | | | | | 2 |
| Disconnect | Search | Calibrate Zero | | | | | Start Calibration |

After transmitting the change to the instrument through the "**Transmit to Instrument**" button in the "**Settings**" tab, the weight increases by 1 Kg, as desired:

| Select Scale no. | <u>70. 0</u> | С | ettings alibration 'g' | 9.8 | 0655 | 1.10 | nber of points | Filter |
|--|--------------|---|--|-----|------|------------|----------------|----------------------|
| Unit of measure Weight | | | Decimal Digits 1 V Unit of Measure Kg V | | Sa | ample Load | ADC points | |
| Channel Al 🕑 | | | Capacity | | | 0 | 0,0 | -12842 |
| | | | | | | 1 10 | 1001.0 | 2208679 |
| -> 0 <- Calibrated Scale Underload/Overload Error | | | Single Range 🛛 👻 | | | 2 2000 | 2000,0 | 0 4430190 |
| | | N | umber | 1 | ¥ | 3 | 3000,0 | 6651703 |
| i en or | | | Capacity | Div | 6 | | | |
| | | 1 | 3000,0 | 1 | * | | | |
| Communication Para Instrument Address | 01 | 2 | 0.0 | | A. | | | |
| Serial port | сом21 🛩 | 3 | 0,0 | | 1 | | | |
| Disconnect | Search | C | alibrate Zero | | | | | Start Calibration |

9.4.2.2.7 EXITING THE PROGRAM

To quit the *Calibration Tool v.II* press either the "**Exit**" button at the bottom or the standard *Windows Close red Button* (X):

| cales - Weighi | | 15 | | |
|--|--------------|------------------------|------------|----------------------------|
| Active Scale Select Scale no. | En is | | alibration | |
| | E , p | Model | 3590E | Import from XML |
| Unit of measure | Weight | Serial Number | 200123456 | Export to XML |
| Channel | All | Version | 02.01.00 | |
| ~ ~ 0 <- Calibrated Scale Underload/Overload | | User Zone 'g' | 9.80655 | |
| | | Brand of Digital Cells | Dgx 💌 | Save setup on instrument |
| Error | | Number of Scales | 1 | |
| Communication Para | motore | Scale | | |
| Instrument Address | 1111111 | Туре | Analog 🖌 | |
| Serial port | COM21 | Number of Channels | 2 💌 | Receive from Instrument |
| Disconnect | Search | Filter | HR 1 💌 | Transmit to |

Then click **Yes** on the confirmation request that follows (of course **No** will return to the main window without exiting):

| CalibrationTool | × |
|--------------------------------|---|
| Are you sure you want to exit? | |
| <u>Si</u> No | |

If a connection with an instrument is in progress, it must be terminated first. This, in case of unsaved changes, will prompt the warnings described at section 9.4.2.2.2.3 (points 3 and 4).

9.4.3 MODIFYING OF A SETUP

To modify a setup one can proceed in various ways:

1) With the left key click on the desired setup in the left window and:

- From the main menu click on "File" and "Open", or
- From the toolbar press "Open";
- 2) With the right key click on the desired setup in the left window, and choose "Edit selected setup",
- 3) With the left key click on the "Setup" item in the left window and:
 - With the right key click on the desired setup in the right window, and choose "Edit selected setup".

At this point it's possible to modify the setup, see section 9.4.1.1.

9.4.4 CANCELLATION OF A SETUP

To cancel a setup one can proceed in various ways:

1) With the left key click on the desired setup in the left window and:

- From the main menu click on "File" and "Delete" (or the CTRL+D fast keys), or
- From the toolbar press "Delete",
- Confirm the request of the cancellation.
- 2) With the right key of the mouse click on the desired setup in the left window, and:
 - Choose "Delete selected items"
 - Confirm the request of the cancellation.

9.4.4.1 CANCELLATION OF SEVERAL SETUP

To cancel various setups simultaneously one should:

- With the left key click on the "Setup" item in the left window.
- With the left key click on the setup that are to be eliminated in the right window.
- With the right key of the mouse click on one of the selected setups in the right window and choose "Delete selected items".
- Confirm the request of the cancellation.

NOTE

To select various objects simultaneously, keep the CTRL key of the PC keyboard pressed and click on the desired codes.

9.4.5 EXPORTING THE SET-UP ON FILE

- Open an existing Set-up (see section 9.4.3):
- By pressing on "Export", it will be possible to export the set-up in a file (with ".mot" extension) in a directory on PC:
 - Select the destination
 - Enter the file name
 - Confirm the operation.

9.4.6 IMPORTING THE SET-UP FROM A FILE

- Open an existing Set-up (see section 9.4.3):
- By pressing on "Import", it will be possible to import the set-up from a ".mot" file previously created through the exportation procedure:
 - Select the file
 - Confirm the operation

10. DINITOOLS UTILITIES

10.1 WEIGH CONSOLE

It's a programme which allows to view on PC the weight displayed on the indicator, receive the weight string using a key of the PC keyboard and receive the list of weighs from the indicator. This string will be received **in any open** Windows application (e.g. database management systems, Excel, Word), in correspondence with the cursor position.

To launch the Weigh Console:

- In the main menu select **TOOLS** >>> **WEIGH CONSOLE:** a new application will appear among the Windows applications as shown in the figure below:



Note: if the scale is not connected, the icon is highlighted in red.

By pressing with the right key on the programme reduced to an icon and selecting "Restore", the application will be shown in the extended mode:



At this point other commands are available:

- ZERO, which emulates the pressing of the ZERO key on the indicator
- **TARE**, which emulates the pressing of the TARE key on the indicator.
- MODE; not managed.
- ENTER/PRINT; not managed.
- **C**, to exit.

CONFIGURATION AND RECEPTION OF THE WEIGHT STRING FROM THE INDICATOR

With the right key of the mouse click on the Weigh Console icon in the bottom right of the applications bar; select **"Config"**:



In this way one has the possibility to configure the tool and select with which key of the PC keyboard one receives the weight string from the indicator:

| Weigh Console - Config | | |
|--|--------------------------------------|--------------------------|
| Control Key CTRL ALT SHIFT | A B C D E F G H | |
| CR CRLF | ○ TAB | None |
| Send unit of measure Alibi Memory PID COM = 7 Baud = 9600 parity = N Start iconized | data =8 stop =1 | Fields Config |
| Language English | | ~ |
| | Ok | Cancel |

It is possible to select any key of the keyboard, also in combination with the CTRL, ALT and SHIFT keys.

- In the "Terminator" field one selects the last character of the received string:
 - o CR
 - o CRLF
 - o TAB
 - o None
- By clicking on "Send unit of measure", also the unit of measure will be received.
- By clicking on "**PID Alibi Memory**", the string of the weight stored in the alibi memory will be received. By pressing the "**Fields**" key it is possible to configure the string to receive only the desired fields.

| Alibi memory print fields | |
|--|--------|
| Printed fields when hot key pressed | |
| S: scale G: gross T: tare K: tare type U: unit P: alibi memory PID To insert one of the listed characters insert 2 of them (ex. GG to insert the character G) Fields | |
| S;G U;K T U;P | |
| Example 1;5.000 kg;PT 1.000 kg;00000-000050 | |
| ОК | Cancel |

- By pressing the **"Config"** key it's possible to configure the parameters relative to the communication between the PC and the weight indicator (see section 5.1), shown to the left of the key.
- By clicking on "Start iconized", the programme will be started always reduced to an icon with the possibility of restoring the extended mode by pressing with the right key on the reduced programme icon and selecting "Restore".
- In the "Language" field it is possible to select one of the available languages to view the menu descriptions and

the checks in the desired language.

- Confirm with OK: by pressing the key (or the keys) previously configured, the weight will be received in any open Windows application (e.g. notepad, Excel, Word), in correspondence with the cursor position.
- The weight data is filtered from the indicator's standard transmission string; it is therefore necessary to set the "standard communication protocol" in the indicator's set-up environment (see the indicator's technical manual).

EXAMPLES

"Notepad" application



"Excel" application

| | licrosoft E | | Cartel1 | | | | | |
|------|------------------|-------|--------------------|---------------------|------------------|-------------------|--------------------------|----------------|
| | <u>File M</u> od | ifica | <u>V</u> isualizza | a <u>I</u> nserisci | F <u>o</u> rmato | <u>S</u> trumenti | <u>D</u> ati Fi <u>n</u> | estra <u>?</u> |
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| Aria | al | | v 10 | • G C | <u>s</u> == | | ₽€ | % 000 ;88 4 |
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| | A | | В | С | D | E | F | G |
| 1 | 1.000 kg | ļ | | | | | | |
| 2 | | 1 | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |

EXAMPLES: STRING FROM ALIBI MEMORY

"Notepad" application – Fields: S;G U;K T U;P



"Notepad" application – Fields: S;GG G U;P



"Excel" application - Fields: S;G U;K T U;P

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|------|--------------------|----------------------|---------------------|---------------------|-------------------|----------------------------|--------------------------|
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| | L18 | • | fx | | | | |
| | A | 8 | C | D | E | F | G |
| 1 | 1;1,316 kg; | ; T 0,174 kg | g;00000-00 | 0040 | | | |
| 2 | | | | | | | 1 |
| 3 | | | | | | | |
| 4 | | | | | | | × |
| 14 | For | glio1 / Fogl | lio2 / Fogli | 03 / | ji vii |) | > |
| Pron | ito | 11 | | | 1 1 1 | | |

"Excel" application - Fields: S;GG G U;P

| | Microsoft Ex] <u>Fi</u> le <u>M</u> odif | 199 (1997) - 190 | | li lavoro di ci F <u>o</u> rmato | Microsoft <u>S</u> trumenti | and the second | estra <u>?</u> |
|------|--|------------------|--------------|-------------------------------------|--------------------------------|----------------|----------------|
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| | N18 | + | fx | | | | |
| | A | В | С | D | E | F | G |
| 1 | 1;G 1,316 I | kg;00000-0 | 00039 | | | | |
| 2 | | | | | | | 1 |
| 3 | | | | | | | |
| 4 | | | | | | | ~ |
| 14 4 | For | glio1 / Fog | lio2 / Foali | 03 / | tit (m | | > |
| Pron | | | | | | NUM | |

RECEPTION OF THE LIST OF WEIGHS FROM THE INDICATOR

With the right key of the mouse click on the Weigh Console icon in the bottom right of the applications bar; select **"Config"**:



In this way one has the possibility to configure the tool:

| Weigh Consol | e - Config | | |
|-------------------------------------|------------|--------------------------------------|--------------------------|
| Control Key CTRL ALT SHIFT | | A B C D E F G H | |
| C Terminator | O CRLF | ○ TAB | None |
| Send unit o | | lata =8 stop =1 | Fields Config |
| Start iconiz | ed | | |
| Language | English | | ~ |
| | | Ok | Cancel |

- By pressing the **"Config**" key it's possible to configure the parameters relative to the communication between the PC and the weight indicator (see section 5.1), shown to the left of the key.
- By clicking on "Start iconized", the programme will be started always reduced to an icon with the possibility of restoring the extended mode by pressing with the right key on the reduced programme icon and selecting "Restore".
- In the "Language" field it is possible to select one of the available languages to view the menu descriptions and the checks in the desired language.
- Enter in the "PC.Conn >> PC.WAit" step of the indicator: the list of weighs is automatically received and displayed by the WeighConsole.

| W | eigh L | .ist | | | | | | |
|---|--------|---------|-------------|----------------|---------|-------|---------|-------|
| | | RECORD | SCALES | DATE TIME | GROSS | TARE | NET | UM |
| | ۱. | 1 | 1 | 30/06/10 08:58 | 75,103 | 0,000 | 75,103 | kg |
| | | 2 | 1 | 30/06/10 08:58 | 135,475 | 0,000 | 135,475 | kg |
| | | 3 | 1 | 30/06/10 08:58 | 60,053 | 0,000 | 60,053 | kg |
| | | 4 | 1 | 30/06/10 08:58 | 152,799 | 0,000 | 152,799 | kg |
| | | 5 | 1 | 30/06/10 08:59 | 100,561 | 0,000 | 100,561 | kg |
| | * | | | | | | | |
| | | | | | | | | |
| | G | et List | Delete List | Save List | | | (| Close |

It is possible to receive the list of weighs also in this way:

- with the right key of the mouse click on the Weigh Console icon in the bottom right of the applications bar; select "Weigh List":



- enter in the "PC.Conn >> PC.WAit" step of the indicator and press the "Get List" key: the list of weighs is received and displayed by the WeighConsole.

| Get List Delete List Save List | Close |
|--------------------------------|-------|
| | |

Save the list:

It is possible to save the list by pressing the "Save List" key; one can select to save the list in the .csv format or in the .xls format (this kinds of file can be opened with Excel).

| Get List Delete List Save List | Close |
|--------------------------------|-------|
| | |

EXAMPLES:

.csv file:

| | File Modi | fica <u>V</u> isuali: | zza Inserisci Forn | nato <u>S</u> trum | enti Dati | Finestra 7 | | Digitare una o | lomanda. | 8 | > |
|---|-----------|-----------------------|--------------------|--------------------|-----------|--|-----|-------------------------|----------|-----------------|---|
| | | _ | lo. ∜ 18, X | _ | | | | AND ROLL FOR CONTRACTOR | | and provide the | |
| | P14 | - | fx | | | | | | | | |
| | A | В | C | D | E | F | G | Н | 1 | J | |
| 1 | RECORD | SCALES | DATE TIME | GROSS | TARE | NET | UM | | | | |
| 2 | 1 | 1 | 30/06/2010 8.58 | 75,103 | 0 | 75,103 | kg | | | | |
| 3 | 2 | ্ৰ | 30/06/2010 8.58 | 135,475 | 0 | 135,475 | kg | | | | |
| 4 | 3 | ্ | 30/06/2010 8.58 | 60,053 | 0 | 60,053 | kg | | | | 1 |
| 5 | 4 | 1 | 30/06/2010 8.58 | 152,799 | 0 | | | | | | 1 |
| 6 | 5 | 1 | 30/06/2010 8.59 | 100,561 | 0 | the second s | | | | | 1 |
| 7 | | Î | | | | | 1 X | | | | |
| 1 | I I II | ST / | 1 | | | < | 1 | 1 | | > | ĩ |

.xls file:

| |] <u>File M</u> od | ifica <u>V</u> isua | alizza <u>I</u> nserisci Fo | ormato <u>S</u> l | trumenti | <u>D</u> ati F | inest | ra <u>?</u> | Digitare | e una domanda | a | 5 × |
|---|--------------------|---------------------|-----------------------------|-------------------|----------|----------------|-------|-------------|----------|---------------|---|-----|
| C | | 3 8 8 | 1 🕰 I 🍄 🕰 🛛 🕅 | G 🖪 | - 🥑 | 17 - (1 | - | ε 🧶 Σ | - A↓ A↓ | 🏨 💿 関 | € | |
| | M10 | + | f∞ <u>T</u> a | iglia | | | | | | | | |
| | A | В | С | D | E | F | G | H | 1 | J | K | |
| 1 | RECORD | SCALES | DATE TIME | GROSS | TARE | NET | UM | | | | | |
| 2 | 1 | 1 | 30/06/2010 8.58 | 75,103 | 0,000 | 75,103 | kg | | | | | |
| 3 | 2 | 1 | 30/06/2010 8.58 | 135,475 | 0,000 | 135,475 | kg | | | | | - |
| 4 | 3 | 1 | 30/06/2010 8.58 | 60,053 | 0,000 | 60,053 | kg | | | | | |
| 5 | 4 | 1 | 30/06/2010 8.58 | 152,799 | 0,000 | 152,799 | kg | | | | | |
| 6 | 5 | 1 | 30/06/2010 8.59 | 100,561 | 0,000 | 100,561 | kg | | | | | |
| 7 | | | | | | | 18 | | | | | |
| 4 | W/H +) | eighs / | | | | | - U | < | iii | 1 | 1 | |

Deletion of the list:

It is possible to delete the list by pressing the "Delete List" key.

| Get List Delete List Save List | Close |
|--------------------------------|-------|
| | |

After pressing this key, one can select to confirm or not perform the deletion of the list.

11. UPDATING DINITOOLS

Starting from version 03.04.00 of the Dinitools programme, it's possible to make a quick update of the file of the programme required for the correct reception/transmission of the setup of the latest releases of indicator versions.

By clicking on the download page on the Dini Argeo web site, it's possible to download the latest available update version along with the relative instructions.

The already installed updated version (driver) is shown in the Dinitools programm in the bottom right hand corner:



12. EXITING THE PROGRAMME

To end the work session:

- · From the main menu select "File" and "Exit" or
- · Press the "Exit" button of the toolbar, or
- Press the closing button in the upper right of the DiniTools window.

Whatever method is used, a message will appear asking for the confirmation of the choice:



By pressing "No" one cancels the request to end the work session, while with "Yes" one definitely exits.